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Account of a visit to Puppá doung, an extinct volcano in Upper Burma.—By WILLIAM T. BLANFORD, F. G. S.

The isolated peak of Puppá* doung (more commonly but incorrectly written Paopa doung) must have attracted the attention of every one who has passed along the Irawaddi valley between Yenángkhyoung and Minkhyán. For some distance below and above Pagán, especially, it is a most conspicuous object, and there is certainly no hill seen from the Irawaddi between Rangoon and Ava, nor perhaps until the Shwé-ú-toung is seen from Malé, which forms an equally striking feature in the varying and picturesque landscape of the river valley. This is not because Puppá is much higher than other mountains seen from the river, many of the more lofty portions of the Arakan Yoma must nearly equal it in elevation, but they are far less prominent, because they only rise slightly above the remainder of the range, the general contour of which is rounded and uninteresting; while Puppá stands completely alone, its steep sides and craggy top, the latter frequently capped with clouds, towering majestically over the low ridges of sandstone sparsely scattered over the country in its neighbourhood. From the difficulty of access to the interior of upper Burma, except in the immediate neighbourhood of the river Irawaddi below the capital, Puppá has, so far as I am aware, never been reached by any European; and, therefore, although my visit was most hasty, a short account of it may prove interesting, by

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shewing that the claims of this fine peak to notice are by no means limited to its picturesque appearance,* and that both its geology and natural history deserve far more attention than I was able to devote to them in the two days to which my stay was necessarily limited.

Towards the end of last October, I was on my return from Mandele, the present capital of Ava, in which town and its neighbourhood I had been staying for about six weeks. Before leaving the city I had been furnished with an order of the king, addressed to the Myo-woon or Governor of Pagán, to assist me in every way. Without such an order, it would, in all probability, be very difficult for any one to visit the mountain,† and it would certainly have been impossible for me, within the few days of my leave which remained unexpired. As it was, I had not the slightest delay, but, reaching Pagán on the afternoon of the 25th October, I was able to start for Puppá the next morning, the Myo-woon sending with me a *Tsare* or writer, and providing me with a pony, coolies and guides.

The distance of Puppá in a direct line from Pagán can be but little over twenty-five miles, but by the road, which winds considerably, this is increased to thirty or thirty-five, about two days' march. The accompanying map is a mere sketch, but it will serve to shew the relative positions of the various places mentioned below.

October 26th.—I left Pagán by a road which passed close to the Dhamayangyee temple, and thence led, by no means in a direct line, towards the N. W. end of the Ta-ywan (or Ta-rwan) hills.‡ Near the town, the country is mostly cultivated at this season, the principal crops being maize *janera*, and a kind of millet called *lú* by the Burmese. The soil is very sandy, but few pebbles occurring. The whole of the slightly undulating tract, over which I passed from

* Major (now Colonel) Yule in the excellent "Narrative of the Mission to Ava," thus writes (p. 25, London edition). "The lofty isolated hill of Paopa was distinctly visible far to the Eastward, showing here a double hummock top. It must be 3000 feet high, at least allowing for the probable distance." And again p. 27. "The remarkable Paopa doung is a more and more conspicuous object as we advance. The Burmese naturally look with some superstitious dread on this isolated mountain which they say it is impossible to ascend, and regard as the dwelling of myriads of Nats and Bilus. See also Dr. Oldham's note in the appendix to the same work, p. 338." Others, besides Col. Yule, have been told by the Burmese that the mountain is inaccessible.

† In this and in other instances in which I was allowed to penetrate into the country above Ava, I was indebted, for this advantage, to Colonel Phayre, the Commissioner of Pegu, who very kindly furnished me with a letter to the chief minister at Mandele.

‡ Tharawadi hills of Col. Yule. Narrative, p. 27.

Pagán to the foot of Puppá, is composed of the series of sands and gravels, with occasional conglomerate beds, which occupies so large a portion of the valley of the Irawaddi between Ava and Prome, and sections of which abound on the river banks between Pagán and Meulhá, especially in the neighbourhood of Yénánkhyoung. Many details concerning them will be found in Dr. Oldham's notes on the geological features of the banks of the Irawaddi, published as an appendix to Col. Yule's "Narrative." In these beds, bones of Mastodon, Elephant, Rhinoceros, Bos and other ruminants, Tortoise, Crocodile, &c., occur in several places, as at Yénánkhyoung, Pakhán-ngé, in the Yau country west of Pagán, &c., and they contain the silicified fossil wood, the abundance of which in this portion of Burma is so remarkable. About Pagán, and to the E. and N. E. of the town, the country occupied by these rocks is less intersected by ravines than is the case further south, and from the undulating plain which slopes gradually and gently upwards from the river, the outcrops of the harder nummulitic beds, which underlie the more recent sands, project, here and there, in the form of straight steep ridges of sandstone of no great height. One of the most prominent of these is the Taywan doung, which stretches for eight or ten miles in a nearly straight line from N. 20 W. to S. 20 E., the dip of the beds being at an angle of about 40° to W. 20 S.

I climbed to the Pagoda at the N. W. end of the range for the purpose of obtaining a few bearings, and from this point I had the first good view of Puppá. From some delay in starting, and a halt about midday for breakfast, together with a few eccentricities on the part of my guide, it was by this time afternoon, and the sun had sunk considerably, so that it shone from behind me upon the mountain. Dr. Oldham, who also saw Puppá from this spot, suggested that it might be formed of metamorphic rocks, like the mountains E. of Ava, and its appearance produced precisely the same impression upon me, although I could see distinctly, even at this distance, that the highest part of the mountain did not consist of a straight ridge, but of a semicircular one, surrounding a central hollow, which suggested a volcanic origin. But such an appearance is not rare in high peaks of gneiss or schistose rocks. There is one remarkable instance in Beerbhoom, about thirty miles S. of Deogurh, in a hill called Patardha.

From Taywan doung, I could also see distinctly that all the upper portion of the peak was free from jungle and covered with grass, a circumstance which suggested sufficient elevation to produce an alteration of the climate at the top.

The road led along the E. side of the Taywan hills, for several miles, to a place called Káma, where I found some wooden charpoys arranged under a shed for our accommodation. The village, like all others which I saw on the road, was a very poor one of about twenty houses, which are built differently from any that I have before met with in Burma, there being no flooring of bamboos or planks raised above the ground. The earth here, as in India, forms the floor, the skeleton of the house is built as usual of wood and the sides and roof closed in with palmyra leaves. Toungwen and Kwébyo were rather larger than Káma. All these villages obtain their water from tanks, which are of small size, and must frequently dry up in the hot weather. Wells, in this sandy region, would probably require to be dug to a depth far exceeding Burmese capabilities, and the broad torrent beds, which abound, never contain water except immediately after very heavy rain.

October 27th.—The road from Káma led for some distance nearly due East to a village called Kwé-byo. The country between this and the Taywan hills is only cultivated in patches, the greater portion being covered with a thin jungle,* composed almost entirely of the cutch tree, (*acacia catechu*,) the jujube plum, (*zizyphus*,) and the zhi phyu or amra, (*Phyllanthus*, I believe,) the acid fruits of which are as much relished by the Burmese as by the natives of India. The Euphorbia, which abounds near the river's bank, is comparatively scarce a short distance inland.

After passing Kwé-byo, the jungle became thicker and more varied, resembling the thinner jungles of Bengal and Orissa, the soil also became more gravelly and ferruginous. Wild animals are said to be very scarce, the only kinds which are found being the barking deer and the tha-meng (*Panolia*) and leopards. Hares (*Lepus Peguensis*) abound however. I here first saw some of the furnaces in which the

* There is a great resemblance between this country and some parts of Southern India. The scenery between Pagán and Kwé-byo recalled to me that between Trichinopoly and the Nilgiris, especially from Caroor to the base of the hills. The resemblance is increased by the thorn fences round all the fields and patches of cultivation.

H L Frazer Lith

Calcutta .1862

PUPPA HILL BURMAH.
from the West

famous Puppá iron is produced. They are not worked at this season of the year, when the population is employed in agriculture. In form they differ entirely from any Indian furnace with which I am acquainted, and they are, so far as I am aware, quite peculiar in producing iron without the use of any artificial blast whatever. The iron obtained, although extremely impure, being mixed with slag and pieces of unburnt charcoal, is in large blocks and of excellent quality, and from this district, that is the country around Puppá, a very large proportion of the iron used in Burma is obtained.

The whole road so far had been a slow but constant ascent from the Irawaddi, but on reaching the village of Endothá a watershed was passed, and a valley lay between it and the mountain, the base of which was now only about five miles distant. The view from this point is perhaps the best on the whole road, and the mountain, its lower portion covered with dense jungle, and the bright grassy outer slopes of the top contrasting with the black precipices of the interior, has a most imposing appearance. Yet it loses much of its height from the elevation of the ground around.* The crater form, which had been gradually becoming more distinct as I approached, was now so remarkable as to leave little doubt of the mountain's being of volcanic origin. To the South was the singular hill of Tounggalá, a peculiar mass in the shape of a truncated cone with very steep sides. It is referred to by Dr. Oldham. Another peculiarity, which here came into view, was a raised terrace-like expanse of flat ground, apparently encircling the mountain and separated from the undulating sandy country around by a precipitous scarp about 500 feet high, which stretched for many miles, forming the opposite side of the hollow in front of me. My suspicions of the nature of this were confirmed on reaching it, by the first blocks of stone which I picked up proving to be an augite porphyry of unmistakeably volcanic origin. A steep road leads up this cliff, the greater portion of which consists of sand, with a cap of volcanic rock, which has evidently preserved the soft underlying beds from the denudation which has reduced the level of the country around.

After ascending the scarp, a walk of about two miles brought me to the town of Puppá, from which the mountain derives its name.

* Endothá is at least 1000 feet above Pagán. At the former place my aneroid at noon marked 28.3 inches, the thermometer being 83°.

It is close to the foot of the volcano, and is said to have been a place of importance in the days when Pagán was the capital of Burma, but it is now only a small village of about forty houses, built in the usual Burmese fashion. I am inclined to doubt its ever having been a place of large size, for I saw no remains of pagodas around, and such usually abound in Burma in the neighbourhood of all towns that have once been wealthy.

The climate here is evidently very much altered; the neighbourhood of the mountain and the increased elevation rendering it much moister than below. The temperature at sun-rise, on the three mornings I was at Puppá, viz., 28th, 29th and 30th October was 73°, 74° and 76°. At Pagán on two mornings, October 26th and November 1st, it was 80°. The change from the barren sand of the Pagán country to the rich soil produced by the decomposition of the volcanic rocks, causes perhaps an even greater alteration in the vegetation than would result from the increased moisture. Rice grows around the town, and fruit trees of many kinds replace the tamarinds which alone seem to flourish around the villages of the sandy country. The elevation by aneroid is about 1,600 feet above Pagán, or 1,900 above the sea.* Water is obtained from a fine spring, which, besides supplying the inhabitants, irrigates several paddy-fields. Indian corn is also largely grown, and in one house I saw it stored in the same peculiar manner as is practised in Sikkim and Nepal, viz.: hung around the top of a post. It is generally, however, strung upon a beam.

October 28th, I started early for the peak. The path led for two or three miles through jungle, the trees being large at first, and

* At Pagán, October 26th, 1861.
Aneroid at 6.30 A. M. 29.665, thermometer 80°.
October 31st, ditto at 12 noon, 29.505, ditto 84°.
November 1st, ditto at 6 A. M. 29.515, ditto 80°.
At Puppá,
October 27th, ditto at 6 P. M. 27.905, ditto 86°.
28th, ditto at 6 A. M. 27.905, ditto 74°.
29th, ditto at 6 A. M. 27.72, ditto 73°.
30th, ditto at 6 A. M. 27.74, ditto 76°.
Very little reliance can be placed upon any of the altitudes mentioned except as approximations. Those of the mountain are much above the level at which an aneroid, the only instrument I possessed for measuring the height, is trustworthy; and my only means of comparison is the mean of the Calcutta observations. Still I have no doubt that those mentioned above are approximations, and as such better than mere guesses. The higher ones are probably in excess, and I suspect the peak is not really more than 4,700 or 4,800 feet in height at the outside.

diminishing in size above. The dampness of the climate was shewn by the presence of several ferns: I counted nine species in the lower part of the hill alone.* About 2000 feet above the town, the path emerged from the jungle upon the grass slopes of the crater. Just beneath this, the trees evidently shewed the effect of elevation, they were thin, with but few straggling branches, and covered with ferns, mosses and lichens. So far the ascent was easy, except that the jungle had, in places, somewhat overgrown the path, but there was a sharp climb to the peak, which is on the South side of the mountain. From this point the view is very fine, extending from the Arakan Yoma mountains, which are seen stretching for at least 100 miles, on the West, to a range of hills, apparently of nearly equal extent, on the East. These, I was told, are called Llein-dha and Theyin-dzu mountains, and are near the town of Penthelé. They could scarcely have been less than eighty miles distant. The whole of the country to the East, so far as its features could be made out, appeared to resemble that through which I had passed on my way from Pagán. All must lie at a considerable elevation, and may be, on that account, moister and less barren than in the neighbourhood of the Irawaddi. All the small ranges of hills seen to the West resembled the Taywandoung, but to the East and South, hills were rather more numerous and irregular in form. One low range of somewhat indefinite shape and direction stretches away for some distance towards the S. E. from the base of Puppá, and I was led to speculate upon the possibility of its having been a lava stream, but, from the description given to me by my guides of the rocks composing it, I am doubtful if such is the case. The sandy beds of streams are seen stretching away for miles, one winding away for an enormous distance to the South is said to be the large stream which flows into the river a few miles above Yénánkhyoung.

The mountain itself is a very fine extinct volcano, the highest peak being approximately 5000 feet above the sea.† A strong wind was blowing, and the thermometer at midday stood at 79°, indeed it was so cool that, while I was waiting for a few clouds, which were

* I only know of five or six species which grow near Thayet Mio and above they are I suspect almost unknown until the Shan hills are reached.

† On the highest peak 28th Oct., aneroid at 11 A. M. 24.75, thermometer 79°
Ditto ditto at 3 P. M. 24.62, ditto 79°.
South peak ditto at 10 A. M. 25.05, ditto 76°.

passing rapidly over the highest peak, to clear off, I preferred sitting in the sun, and out of the wind, which came roaring up from the great central hollow. The crater is about a mile across, and the sides stretch down in black precipices to a depth of probably not less than 2000 feet. I regretted much that I could not devote a day to the examination of the interior of the crater. Dense jungle filled the bottom, and trees grew upon the sides wherever there was a hold for their roots. On the North side or a little East of North, the side of the crater has been broken down, so that no lake exists within. The South side, opposite to the gap, is far higher than to the East or West, and the two highest peaks, one about 300 feet above the other, are about half a mile apart, and owe their prominence to being composed of dykes of a very granular and ill crystallized rock, which has resisted the wearing effects of decomposition and rain better than the softer beds of volcanic ash which form the cone, and the bedding of which is beautifully seen inside the crater. Their slope is about 35° to 40° in most parts. The whole upper portion of the volcano is formed of these ash beds, the lava flows having apparently been lateral.

I regret much that my ignorance of botanical science prevents me from giving any detailed account of the vegetation of this peak. There appeared to be a peculiar mixture of tropical and temperate forms, and the latter must be interesting from the complete isolation of the hill. The common brakes, *Pteris aquilina*, is abundant, together with two other ferns* of more tropical appearance. A large thistle with formidable spines is common, and the only plant which has any claims to be considered a tree is, strangely enough, the wild date palm.† A few straggling trees inside the crater were dwarfed and covered with lichens and mosses.

* One is I think *Nothochlæna argentea*.

† I have heard that the same is the case on the Western Ghâts of India. The complete change in the vegetation below 4000 feet upon a hill in Burma is very curious, when it is remembered that no such alteration takes place upon Parasnath (4500 feet high) in Bengal, a mountain which may fairly be compared, as being very nearly as high as Puppá, and equally isolated. The lower level to which temperate plants descend East of the Bay of Bengal has been attributed to the greater moisture of the climate, but, in upper Burma, the rain fall must be far less than in Bengal, and little if at all heavier than in the plains of the Carnatic. It is scarcely possible that more rain falls on Puppá, separated from the sea by the high range of the Arakan Yoma, than on Parasnath, with no such barrier to intercept the moisture.

I turned up several three toed quails in the grass, but saw scarcely any other birds. The only large animal common on the hill is said to be the goat antelope, hemorhedus, which I had not the good fortune to see, although I came upon fresh tracks. They are said to keep mostly in the jungle, only occasionally venturing out upon the grass slopes to feed. The same animal is common on the Shan hills, East of Ava. The tigers said to abound upon Puppá are, I imagine, of nearly as dubious authenticity as the Náts and Bilús which also have the credit of taking up their residence there.

I found very few land shells, the only species which were abundant were an *Alycæus* and a *Diplommatina*, both undescribed species. Somewhat to my surprise also I found *Helix Huttoni*, Pfr., a shell which occurs upon the Himalayas from Landour to Sikkim, and which I have also met with on the Nilgiris of Southern India. It was not very common. A smaller helix completed the list. Not many species, however, could be expected from an isolated peak. Near the base I found *Cyclophorus fulguratus* which I had not met with further North and one or two other species.

29*th*.—I passed the day in a partial examination of the rocks at the foot of Puppá, in the hopes of ascertaining the geological age of the volcanic outburst. I went first to the very singular hill of Toung-galá, which lies W. by S. of the principal peak and is almost detached from the terrace before mentioned. It is a mass of very beautiful augite porphyry (somewhat trachytic in its composition,) and is evidently a comparatively isolated outburst, sandstones occurring between it and the large hill. It has, possibly, formed the nucleus of a lateral outburst of lava, but, if so, subsequent denuda-

What rule governs the limit of grass on Indian mountains?

On the moist Sikkim Himalayas it is not found below 12,000 feet at least, on the drier eastern portion of that range it is, I believe, considerably lower. On the eastern side of the Nilgiris, it is about 6000 feet. On the Kolamullies near Trichinopolye (as I have been informed by Mr. Foote) grass occurs at about 5000. On Shwe oo toung, North of Ava, in a much damper climate than Pagán, only the topmost peak as seen from Malé appears to be covered with grass. This mountain is certainly I think higher than Puppá, and Dr. Oldham estimated it at 6000 feet. So far we might suppose, that the drier the climate the lower the level of the grass slopes. But on the other hand, the level is much lower on the wet western side of the Nilgiris than on their drier eastern watershed, and on the wettist of all the Indian hills, viz., the Khasi range, it is said to be as low as 4000 feet. On the mountains west of Moulmain it is between 7000 and 8000 feet according to Major Tickell. The rocks on Puppá are peculiar, but nearly all the other mountains mentioned consist of gneiss.

tion has removed all traces of the vent and left a solid projecting mass, with a shelving top. It is precipitous on every side, and all my endeavours to climb it were useless, for although, in one place, I reached within about 100 feet of the top, I could not get higher without a ladder. The Burmese said that formerly it could be scaled, but some rocks had since fallen down, and now they could only get up by means of bamboos. As I had so little time, I would not waste it by waiting to make a ladder, but went on to examine the beds forming the scarp already referred to as surrounding the mountain. The results, which I only made out clearly on the following morning on my way down from the mountain, when returning to Pagán, were the following.

The great terrace consists of sands and sandy clays generally horizontal, but occasionally disturbed, probably by dykes, which abound in the neighbourhood of Toung-galá and in some other places. On the top is a cap, varying in thickness, of ash beds and lava flows. This cap is beautifully seen on some small outliers detached from the terrace and called Toung-thong-loon (the three hills) which lie about three miles west of the village of Puppá, and consist of sand with a covering thirty or forty feet thick of volcanic ashes, upon which rests lava of about the same thickness. All of these lavas are of the same character as the rock of Toung-galá, but less distinctly crystallized.* From opposite the most southerly of the Toung-thong-loon, a valley excavated by a stream, the head-waters of which supply the village of Puppá with water, extends for some distance into the hill, and its precipitous sides, where not concealed by tatees, shew the fine section given beneath. The thickness assigned to each bed is only approximate, as the sides of the valley were, in most places, too nearly vertical to be accessible.

1. Lava of variable thickness capping the whole.
2. Soft sands and sandy clays, yellow and greenish with black specks; micaceous, about ..... 80 feet.

* I am not quite certain whether the mineral I have called augite may not be hornblend. A few detached crystals which I found among the ash beds near the top of the mountain had the crystalline form of the latter mineral. The mass of the lava is grey and somewhat resembles phonolite, but is beautifully marked by the black augite (or hornblend) crystals. It would be a beautiful stone for ornamental purposes.

3. White sandy bed abounding in fragments of pumice to which its colour is due. Wanting on the South side of the valley; on the North about, ... 15 feet.
4. Volcanic ash containing quartz pebbles, thicker on the South side of the valley than on the North, ... 5 to 15 „
5. Ferruginous gravel and sandy clay, containing quartz pebbles of small size, and numerous concretions of peroxide of iron, the iron ore of the country. Variable in thickness, ... 1 to 4 „
6. Coarse sand mostly yellowish with white specks. It contains pebbles in places. Upwards of 100 seen.

It is evident that the ash bed, No. 4, is of the same general age as the sands above and below, and that it was deposited in water is clear from its containing quartz pebbles. There can, therefore, be no doubt that it records an eruption of the mountain, perhaps with an east wind blowing, at the time when the lake or estuary, which then surrounded Puppá, was being gradually filled up by sandy deposits. There can be also little question as to the identity of the beds of the above section with the sands and conglomerates containing fossil wood and mammalian bones at Yénánkhyoung, Pagán, &c. Fragments of fossil wood evidently derived from these deposits are found about Puppá, and to complete the evidence, I found a piece, not rolled as such blocks are in the more recent gravels, in situ in the ash bed itself.

The period during which Puppá was in action was therefore, in parts at least, not later than that of the deposition of beds containing remains of Elephas, Mastodon, Rhinoceros, Hippopotamus, and Ruminants. The geological age of these beds has, with some doubt, been considered to be Miocene, but from their general fauna, and especially from the abundance of bones of Bos and Cervus, a more recent date may, I think, with at least equal probability, be assigned to them. There can be no question but that the fires of Puppá have long been extinct; its thick coating of jungle and grass, and the existence upon it of species of plants and animals, which, for want of a suitable habitat, cannot exist in any neighbouring locality, and the evidence of the effects of subaërial denudation on its surface,

render it certain that it must long have been in a condition for vegetation to flourish upon it, but it is scarcely possible, even in the dry climate of upper Burma, that a volcano of Miocene age should have retained its form so perfectly. It is more probably Pliocene. Its bulk is not great, and, from the absence of other vents in the neighbourhood, so far as is known, it is scarcely probable, that its volcanic activity can have extended over a lengthened geological period. I could not learn that there was the slightest tradition among the people as to its ever having been in action within the memory of man, a circumstance, on the grounds mentioned, extremely improbable. The occurrence, on the summit, of the common brakes, and doubtless of other plants of temperate regions, renders it probable that the close of the glacial period found its surface in a fit state to support vegetation.

The discovery of a volcano of comparatively recent geological date in Burma is the more interesting from the circumstance that the long line of volcanoes which has been traced throughout the Eastern archipelago has hitherto appeared to end abruptly at Kyouk Phyú on the Arakan coast. The so-called mud volcanoes of Memboo have no connexion with true volcanic action, but igneous eruptions have been recorded at Kyouk Phyú and Chedúba.* Puppá is very little removed from the continuation of a line passing through Barren island and Ramri, and there is thus a possibility of the extension of the great eastern line of volcanic outbursts into the countries of Western China; probably, as at Puppá, in the form of extinct cones.

I left Puppá on the 30th October, and reached Pagán the next day about mid-day, the road by which I returned being somewhat shorter than that by which I went to the mountain.

* There is a great peak standing out prominently from the west or Arakan side of the Yoma, a little north of west from Ramri. I have no idea of what its geological formation is, but it does not look like a volcano. Still it may have been one.

A SKETCH MAP
OF
UPPER and LOWER
SUWÁT
and the
KOHISTAN
to the SOURCE of the
SUWÁT RIVER.
Shâh-gram
Chawkatt
Har-yan
Mân-kial
Chuhil
Ramett
Cham
Chur-rrai
M A L I N Í   A F G H Á N S
P A N J K O R A H

MALIZAI

KHADAKZAI KHEL

AKHUNDKHEL

KHUDAKHEL

MATURAZAI

KHANAKHEL

HAJI-KHEL

YUSUFZAI

BUNER

SWAT

SAMAH

UTMAN KHEL

KHADAKZAI KHEL

MAHSUD

Tirahzai

Thar-era'i

Piri

Lundkai

Rin-garri

Darwesh khel

Shaubat

Khanah

Shuen ki-ka

Shuen e-pa in

Khanah khel

Shaikh-garah

Kaibul-gram

Bala d'Pai

Bandi

Thanjiara

Damghar

Thar kapk

Matalawai

Shewah Pass

Hawk

Hangawarah

Sangdupin

Islam-gai

Mountains

Karraay

Khar-mandh

Hanna

Shankor dar

Kim-khel

Thar-mai

Ouch i bala

Ouch i gani

Chak darah

Hasan

Matakani

Tatakai

Degri

Shu

Allah dadad

Char

Hakkhand

Malakand

Pass

Kotal

Sarai

Baragai

Shah kot

Ilmas kelli

Hera

Bazdarah Pass

Bazdarah Balla

Shahkot

Ratkai

Sarmat Garrai

Mardan

Char sadda

Peshawar

Nuh shahrah

Kabul river

Sataiwh

Kabul

PESHAWAR

An account of Upper and Lower Suwát, and the Kohistán, to the source of the Suwát River; with an account of the tribes inhabiting those valleys.—By Captain H. G. Raverty, *3rd Regiment, Bombay N. I.*

In August, 1858, I sent an intelligent man, a native of Kandahár, who had been for many years in my service, and who spoke and understood the Pushto language well, for the purpose of obtaining a scarce work in the Pushto language "the history of the Yúsufzí tribe, and their conquests in Suwát and other districts near Pesháwar, by Shaykh malí, Yúsufzí," a copy of which, I was informed, was in the possession of the chiefs of Tárrnah, one of the divisions of Suwát. That valley, although so close to Pesháwar, is almost a *terra incognita* to us; and various incredible reports have been circulated about the fanaticism of its people and their Akhúnd,* who is made out to be employed, the whole of his time, in plotting against the English; and has had the credit of every disturbance that has taken place on the frontier since the annexation of the Panjáb. Such is his power, so they would make out, that armies of Gházís arise at his bidding, and that he makes and unmakes kings at his will. On this account, now that an opportunity offered, I was anxious to gain as much information as possible on this subject. The person I sent had on previous occasions collected information for me, on such matters, and was acquainted with the chief points on which inquiry should be made; but I also furnished him with a number of questions, the replies to which have been embodied in the following pages, and will account for the rambling style in which, I fear, it has been written. At the end will be found a description of Suwát, taken from a poem in the Pushto language, written about two hundred years since, by the renowned warrior and poet, Khushhál Khán, chief of the Khattak tribe of Afgháns.

"On the 14th August of the year 1858, agreeably to your orders, I set out from Pesháwar, in company with the Khán Sáhib,† towards Suwát. Our first journey was to Hashtnagar; and in the

* A Persian word signifying, a tutor, a preceptor.

† The name of this chief I have not given, as he would not like it to be known, lest it might create heart-burning against him.

village of Prráng I purchased three quires of English paper, as requested by him, which I made over to Sháhbáz Khán to have the *manuscripts* of the poem of Khusrau and Shírín copied thereon by the time I returned. The next stage brought us to Jamál Garraey, the residence of Muhammad Afzal Khán, Khattak. On the 17th August, we proceeded by way of the mountain of Chíchárr, and the village of Káttlang, which I visited with you when the 3rd Bombay N. I. was here with Colonel Bradshaw's force, in December, 1849. We halted at the village of Kúhai, a short distance in advance, for the night; and the KHÁN SÁHIB sent for the Malik, or head man of the village, to ask his advice as to our entering Suwát, which, as you are well aware, is difficult at all times, but more particularly so for one, like myself, who am a Mughal, not an Afghán. Malik Muhammad Æalí said, that the matter would not be a very difficult one, if Amír-ullah Khán, chief of Pala'í, should consent to allow us to proceed by that route, otherwise it would be difficult indeed. At length it was determined, that in the first place, Muhammad Æalí should go to Amír-ullah Khán, and speak to him on the subject; and in case he should agree to receive us, to bring us his reply accordingly. He set out; and in due course brought us a reply from the chief of Pala'í to the effect, that at the present time, there was continual skirmishing going on between himself and Khurásan Khán of Shír-khána'í and Zor-mandda'í, two villages higher up the valley. You will doubtless recollect also, that these were the self-same villages which were burnt by the force under Colonel Bradshaw before referred to; and it was on the hills, to the north of these villages, that the large force of Afgháns were assembled on that memorable night when you commanded the outlying Picket of the 3rd Regiment, when you heard the Afgháns in front—to get a sight of whom you had gone in advance of your centries, with a simple sepoy—exclaiming in Pushto, that "all the Farangí dogs were asleep," and that it was a favorable time to come on, not knowing that a hot reception was awaiting them. To return, however, to the message from the Pala'í chief, he said, that in consequence of the disagreement between himself and Khurásan Khán, there were also disturbances at Tárrnah, the chief town of this part of Suwát, to the Kháns, or chiefs of which they were both related, and who were, themselves, at enmity with each other; and on this account

he considered our going into Suwát, at present, a very difficult matter. This message, however, did not satisfy the KHÁN SÁHIB; and Muhammad Æalí was again sent to the Pala'í chief, Amír-ullah Khán, with another message, to the effect, that "This feud between yourselves will take a long time to settle amicably; and as you are all of one family, if you do not hinder my going, the other party will throw no obstacle in my way." Amír-ullah replied, that he would conduct us, and be answerable for our safety within his own boundary; but he would not be responsible for any injury we might sustain at the hands of Khurásan Khán, the Shír-khána'í chief. The KHÁN SÁHIB accepted these terms; and, next morning, we set out by way of the village of Ghází Bábá; and in the evening, before dark, reached Pala'í in safety. We found the Pala'í people, with their loins girded, sitting in their *sangars* or breast works, and occupying the roads and paths by which the enemy from Shír-khána'í and Zor-mandda'í might come upon them. Some of the men too had advanced a short distance from the village, and had placed themselves in ambush amongst the fields, in order to fall upon any of the Zor-mandda'í people who might venture out of their stronghold.

That night we remained at Pala'í as guests of the chief, Amír-ullah, who did all he could to persuade the KHÁN SÁHIB to give up his journey; but he would neither listen to any excuses, nor admit of any obstacles. At length it was agreed on by Amir-ullah, that he should send one of his most trusty followers to his brother, Mír Æealam Khán, one of the Tárrnah chiefs, to let him know, that the KHÁN SÁHIB, (mentioning his name) was on his way to Suwát for the purpose of paying his respects to the Akhúnd Sáhib; and that it was necessary he should treat him with all honour, aud perform towards him the rights of service and hospitality, and not allow him to sustain any injury on account of the feud between themselves. The indefatigable Muhammad Æalí, who had also come with us to Pala'í, now went with a message to Khurásan Kháu, chief of Shír-kháua'í and Zor-mandda'í, to let him know that the KHÁN SÁHIB was coming to his village as a guest, aud that he should not be treated as the guest of the preceding day, who had been accidentally killed. This person was a traveller who had been entertained at Pala'í the previous night. In the morning, about dawn,

he wished the gate open that he might resume his journey. The party there advised him to wait until it got a little lighter, but he would not consent; so they opened it for him. He had scarcely advanced a score of yards when he came upon a party of the enemy from Zor-mandda'í, who were lying in ambush for the Pala'í-wáls. One of them, not knowing who it was, fired his matchlock at him, but missed. The guest began to call out, "Do not fire! do not kill me! I am a guest!" The words had scarcely time to pass his mouth and had not, probably, been heard by the enemy, when five or six matchlocks were discharged at him, two balls from which hit him, and he fell dead on the spot. On making inquiry, the unfortunate man proved to be of the Utman-khel. The messenger also added on his own part, that knowing who the KHÁN SÁHIB was, if he should receive any injury from the hands of himself (Khurásan Khán), or his followers, the powerful tribe to which he belonged would burn his villages about his head, and root out all his people. Muhammad Æalí returned with a favorable reply; and on the morning of the 18th August, we proceeded towards Zor-mandda'í, which is only about the distance of a cannon shot from Pala'í; but we were greatly afraid lest the stupidity of the Zor-mandda'í people might lead them to try the range of their matchlocks upon us, who would be in danger of our lives, whilst affording amusement to them; as they relate of the Khaibarís, who, having seized a very steut traveller, thought it an admirable opportunity to try their knives upon him, and did so too; and, of course, killed the poor man. However, we passed Zor-mandda'í in safety, and reached Shír-khána'í, where the KHÁN SÁHIB obtained an interview with Khurásan Khán, the chief, who also strongly advised us not to proceed, as we could not have chosen a worse time for our visit to Suwát; but as before, the KHÁN SÁHIB, with true Afghán obstinacy, would not listen to any advice or arguments tending to delay, or put off his journey; so, without staying at Shír-khána'í, we set out for Suwát by the Pass over the Morah mountain, which is hence called the Morey *kolat*.

About a mile or less from the last named village, we beheld to the right, as we proceeded, the road leading to the village of Upper Bári-darah. We passed the road or path leading to the other village of Lower Bári-darah, which was also near; but a spur of the mountains intervening, hid it from our sight. These villages lie in the

valley of Báz-darah, which is so called on account of the number of falcons taken there, for which it is celebrated; and it is also famous as having been the residence of Durkhána'í the Peerless, whose love and misfortunes, and that of her lover, Adam Khán, have been celebrated, in prose and verse, and is sung or repeated throughout all Afghánistán. We had now to dismount and ascend the pass on foot, as it is full two miles in ascent; and no loaded camel could possibly get up it, unless, indeed, it were one of the Bákhtrían breed; but then at considerable risk, even if without a load. The Pass is, however, practicable for ponies, horses, mules, and bullocks. We observed immense quantities of the grass called *sábah*, with small leaves, and growing very long; and also that description called *sar-garrí* in Pushto, which is the same as that given, dried, in bundles to horses in the Bombay Presidency. The *sábah* I never saw before. The ground is a steep ascent; and like most paths of the kind, in this part of the world, it is full of boulders, in all directions. The path does not lead along between two cliffs, as it were; but is trench-like, and as if deepened by heavy floods. It is very winding; and appeared to consist of a soft description of stone, like sandstone. As we went along, the Khán Sáhib remarked, that if any one wanted to make a good road into Suwát, this was the best for the purpose on account of the softness of the stone, whilst in the other *kotals*, or Passes into the valley, there was only hard rock. This I found quite correct when I returned by the Malakand Pass. The breadth, as we ascended, was in some places so broad as to allow of the Khán Sáhib and myself walking abreast; but, generally, it was so narrow that we had to proceed in single file. There are no pine trees in the path itself; but the sides of the mountains, to the very summits, were clothed with patches of them. It is from the cones of this description of pine that the nut-like kernel, similar to the pistachio, is produced; but they were not, then, sufficiently ripe. This Pass also contains, and in fact all these mountains contain, immense quantities of a sort of gravel, both coarse and fine, which is like small shot, and very heavy. It is called *charata'í* by the Afgháns, who use it to shoot partridges, pigeons, quail, and the like. I saw it, generally, in all the different Passes; and in Upper Suwát, I also saw it on the roads and paths, but did not notice any in the ravines or beds of rivers. Its colour is that of earth, turbid, or nearly black, and very

heavy, not smooth like the gravel of the sea-shore or beds of rivers, but rough and many-sided, like as if stone had been broken into particles and then become somewhat rounded from having been rubbed together.* This gravel has no doubt given the name to another Pass, a little to the west of that of Morah which we were ascending, known as the Charat Pass. I noticed the path leading into that Pass; and have been told that it is very steep and difficult, and only practicable for parties on foot, and animals without loads. The direction we proceeded in from Sherkhána'í first branched off a little to the right; and the path to the Charat Pass lay to our left, in a direction about north-west. I had collected a small quantity of *charata'í* to send to you, but lost it, somehow or other, before I reached Pesháwar. In Upper Suwát they call it *gítta'í*, but this is the Pushto term for gravel in general. I have no doubt but that it is some mineral substance containing iron, and that it has become rounded by the action of water; for, in the winter, the ravines become the beds of torrents.

We saw numbers of partridges of two species, the grey and the black, besides a great many quail.

By degrees we had now reached the crest of the Pass; and on descending a short distance on the other side, we came to a plane tree, beneath which there is a spring of the most cool, pure, and sweet water; and round about it numerous spikenards were growing. In short, it was a very delightful spot; and we sat down and rested for some time, and refreshed ourselves with draughts of the crystal element. This is the only spot in the Pass where water is procurable. When standing on the crest of the mountain, at the summit of the Pass, I could see the Suwát valley to the north, but could not perceive Tárrnah, for it was screened, or hidden, by the mountains. I could, however, see the village of Nal-bánddah; and by going a little on one side, in an easterly direction, I could discern Shírkhána'í to the south.

We now commenced to descend into the Suwát valley. The southern side of the mountain which we had just ascended, was extremely steep; but we did not find it anything near so much so descending on the northern side, the Suwát valley being much more elevated than that of Báz-darah and Pala'í which we had recently

* Emery?

passed. At the foot of the Pass, and directly under the mountains, we came to the village of Nal-bánddah, the first we reached in Suwát. It is said, that a husbandman of this place once found a number of gold coins in a well close by; but the other villagers, hearing of it, took the treasure from him, and shared it amongst themselves, after which they filled up the well, that no one should get any thing out of it in future. We asked two or three parties on what side of the village the well was situated, but they would not point it out, and said to us: "So you are come here to discover treasure, are you! be under no concern; for your wishes will not be fulfilled."

After proceeding two *coss* or three miles further on, we reached the town of Tárrnah, to the west of which there is a small stream; and on the banks of it, there is a fine grove of *chinár* or plane trees, about a hundred in number, all very ancient, very large, and very lofty; and here we came to a halt.

Mír Æalam Khán, the chief of Tárrnah, came to pay his respects to the Khán Ṣáhib; and after some conversation, the chief, who had been eyeing me for some time, inquired who I was. The Khán Ṣáhib replied, "He is a Mullá, and is going on a pilgrimage to the Akhúnd Ṣáhib." He replied, "He is no more a Mullá than I am; but you have made him one for the nonce." On this the Khán Ṣáhib observed, "Probably Amír Ullah Khán of Pala'í may have advised you of my being on my way into Suwát." He laughed, and replied: "The day you left Jamál Garraí I heard of your coming to pay your respects to the Akhúnd Ṣáhib. It is all well: allow no matter of concern whatever to enter your mind; but the people of Suwát are so celebrated for their stupidity and thick-headedness, that it is necessary you should be prudent and circumspect in every thing." The Kháns or Chiefs of Tárrnah are descendants of Hamzah Khán,* the founder of the village of that name in the Yúsufzí district south of Suwát, and about eight miles north of Hotí Mardán. He lived in the time of Khushhál Khán, Khattak; for it was his daughter that Khushhál mentions in his poem on Suwát, as having married when there, or whom he was about to marry; and she was mother of his son, Sadi Khán. Hamzah Khán was the then ruler of Suwát, and held sway over the *Samah* also. It was he also fixed

* See the extract from the poem at the end of this paper.

upon Tárr*n*ah as the permanent residence of the Chiefs, as it was centrally situated, amongst his own clan, the Solizís of the Bá'í-zí division, by which name the people of Tárr*n*ah are still called; but they are, sometimes, also styled the Khán-khel, or Chieftain's clan. The Khán-khel too may be subdivided, according to what the KHÁN SÁHIB said. The one being the family to which the Chief *de facto* belongs, the whole of the males of which are called Kháns; and the other, the family to which the Chieftainship rightfully belongs, or the Chief *de jure*, but whose family may have been set aside, or passed over, which is merely the Khán-khel. For instance: if a Suwáti be asked to what clan a certain person belongs, he will say the Khán-khel; but it must be then asked whether the person is a Khán or only one of the Khán-khel. If he be a member of the family of the Chief *de facto*, he will reply he is a Khán; but if of the family who may be the rightful claimants to the Chieftainship, but passed over, or set aside, he will say he is of the Khán-khel. The Tárr*n*ah Chiefs *de facto*, who are the heads of the Bá'í-zi division, are of two families, the *bar-kor*, or upper family or house, and the *kúz-kor*, or lower family or house, in reference to Tárr*n*ah and its dependencies above the Morey Pass, and Pala'í, and its dependencies below. These two families are descended from Jalál Khán, son of Hamzah Khán, above referred to, and are always at feud. Mír Æalam Khán Chief of Tárr*n*ah, Amír Ullah Khán ruler of Pala'í, and Maæsúm Khán, their brother, who dwells at Tárr*n*ah, are of the *bar-kor;* and Khurásan Khán, ruler of Zor-manddaí, Sher-khána'í, and the two Báz-darah villages, and Bábú Khán, who resides also at Tárr*n*ah, belong to the *kúz-kor*. Mír Æalam Khán, who is considered the greatest of the Tárr*n*ah Chiefs, is about fifty years of age. The next in rank and consideration is Maæsúm Khán, his brother, who is about thirty years old; then comes Amír Ullah of Pala'í, aged forty, and Khurásan Khán of Zor-mandda'í who is about fifty years of age; and Bábú Khán of Tárr*n*ah aged fifty, besides numerous children.

The day passed away pleasantly enough under the shade of these beautiful trees; and in the evening we went to the residence of the chief; and in his guest chamber we remained the night.

Tárr*n*ah, which is the most considerable town in Suwát, contains somewhat more than 1,000 houses, which, at the usual computation,

gives about 5,000 inhabitants. The people are Afgháns of the Bá-í-zí branch of the powerful and numerous tribe of the Yúsufzís. About a hundred houses are inhabited by Hindús, Paránchahs, and other traders, who also follow such occupations as that of shoemakers, smiths, barbers, &c.

The town of Tárrnah lies a short distance from the skirt of the mountains bounding Suwát to the south, and on the eastern bank of the river of the same name, the Suastus of the Greeks, from which it is distant about half a mile.

The village of Nal-Bánddah, which was previously referred to, lies at the very skirt of the Morah mountains, on a spur which has become separated from the higher range and runs about three, or three and half miles a little to the mouth of Tárrnah.

After passing Nal-Bánddah, the land slopes down to the river, but not in such a manner that anything set a-going will, of itself, ride down to the river. The land of the whole of Suwát, in fact, is like a boat, the sides of the boat are the mountains, and the bottom part the land, as different materially from the mountains. The lowest land in the valley is that portion through which the river flows; and it gradually rises until close up to the mountains. It may also be compared to the two hands placed together like as when one wishes to drink out of them; but only just sufficiently raised so as to prevent the water from running out.

I found, from what I heard of the most respectable inhabitants of Tárrnah, that Shaykh Malí was a Yúsufzí Afghán, and that his descendants still dwell in Suwát; but they could not give me full particulars as to what village they might be found in; neither could they inform me regarding the place where the Shaykh was buried. Khán Kajú, or Kachú belonged to the Rárrnízí branch of the Yúsufzí tribe; and his descendants also dwell in the valley, at the village of Allah Ddaud, and will be mentioned in the notice of that place, further on.

The historical work written by Shaykh Malí is not in the possession of the Tárrnah chiefs; and they, moreover, informed us, that the work would not be found in the whole country, save in the possession of Khán Kajú's family.

We now prepared to start from Tárrnah towards Upper Suwát. On the morning of the 22nd August, we left Tárrnah, bending our

steps towards the north, but inclining to the east, which might be termed N. N. E. We passed the villages of Jalálá, Haibat Grám,* and Ddandakaey, and reached the mountain of Landdakaey, close at the foot of which the Suwát river runs. On this account, in the summer months, when the river is swollen from the melting of the snows towards its source, in the direction of Gilgit, the pathway, lying along the banks, at the foot of the mountain, is impracticable from the force of the stream, which foams and boils along with great violence. A road, has, consequently, been made over the crest of Landdakaey itself; but it is extremely narrow, and so frightfully steep, that one of our own party, an Afghán, and accustomed to the mountains from his childhood, passed with the greatest difficulty; for when he ventured to look down he became quite giddy. In the cold season, when the volume of water decreases, the path at the foot of Landdakaey is used. This last named mountain has no connection with that of Morah; but it is a spur of the range, of which Morah is a part, that has come down close upon the river, or rather the river washes its base, as appears from the map, which you sent with me to be filled up. In this part of the river, there are two branches, one much more considerable than the other. The lesser one becomes quite dry in the cold season, and in the hot season has about three feet depth of water. This is very narrow, with steep banks and rugged bed, along which the water rushes impetuously. The other branch contains a much greater volume, and lies furthest from the Landdakaey mountain. On ascending the mountain, up to the end or extremity of the spur, where, in the map, I have brought the mountain and river together, the road leading along the side of the precipice is very difficult, being naturally scarped, like a wall, for about fifty paces; and the road, if it can be so called, is built up into rough steps with slabs of stone, so very smooth, that a person is liable to slip. After this dangerous path has been passed over, you have to ascend about fifteen paces, then some twenty more in a horizontal direction; and, finally, fifteen paces, or thereabout, down again. I mentioned before, that one of our party had great difficulty in getting along: this was no other than the Khán Sáhib himself. When we came to this dangerous passage, he stopped and waxed pale; and turning towards me said: "I die for you." I was

* Grám in Sanskrit signifies a village.

astonished, and asked, "Why?" He replied: "My eyes turn dim, dim." I comforted him as well as I could, and took off my shoes; and with my face to the river and back to the mountain, I crawled along, and he followed after me; and so afraid was he, that he looked at the river every moment, although I forbade him; but he was so overcome with horrid fancies, that he had not the power to restrain his eyes. This difficult path is not quite a yard broad, and is, at least, two hundred yards above the river, which foams beneath. After we had escaped from this place in safety, the KHÁN SÁHIB came to himself again, in some measure; for he put on his shoes, and began to walk upright. I could not discover who had made this road, although I afterwards made inquiry. There is another road to the east of the one we had passed, which leads over the crest of Landdakaey itself, and by it animals are brought, when the water is at its height, but I did not examine it. We noticed that on the opposite side of the river, the mountains forming the north-western boundary of the Suwát valley approach within about three miles of this point. The river is said now to have entered that part of Suwát termed *wuchah* or the dry, which will be referred to in its proper place. Landdakaey is about three miles distant from Tárrnah, to the north.

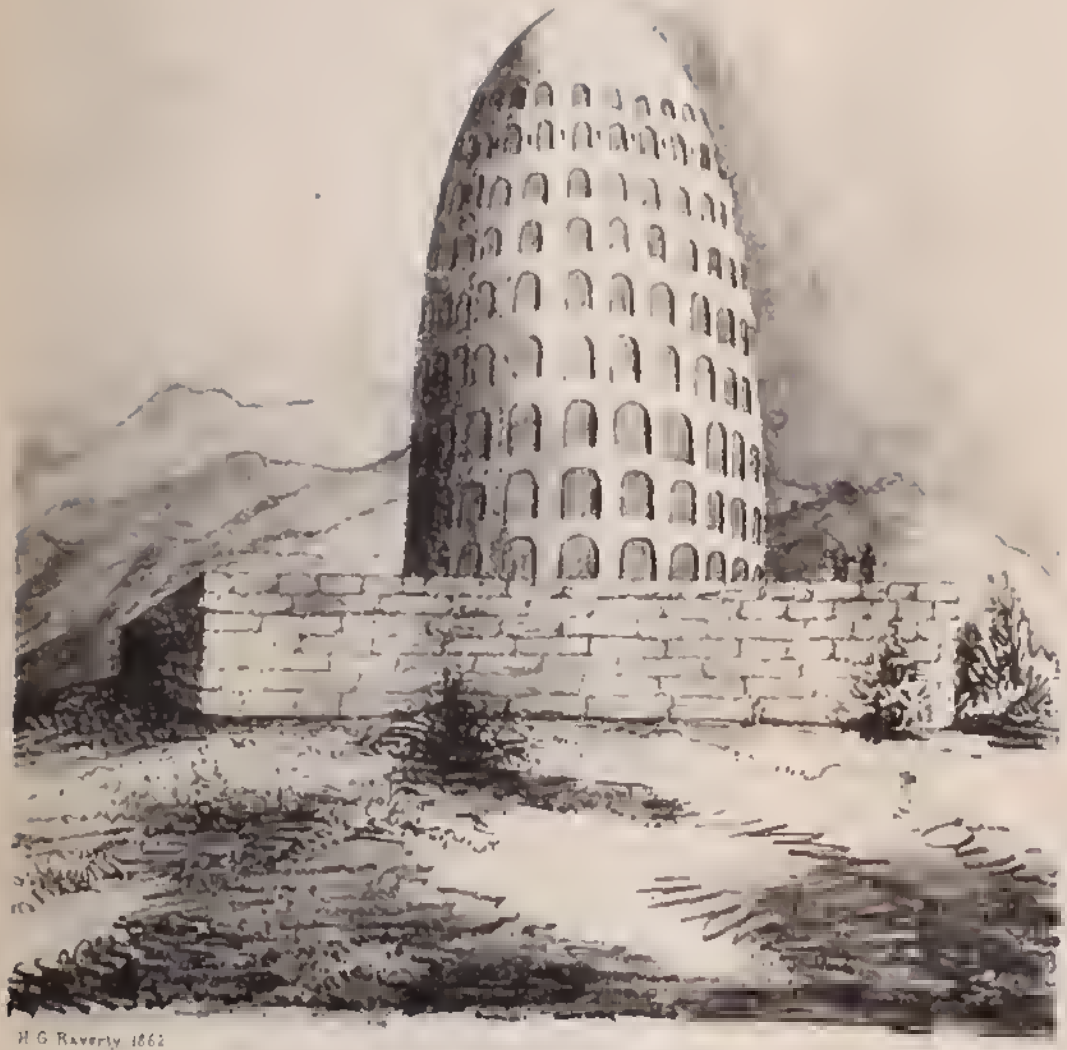
After getting clear of our difficulties, and out of our dangers, we reached the small village of Kottah, to the south of which, on the very summit of the mountains, there are extensive ruins of buildings, so numerous indeed, that I had never seen the like anywhere else. Two of these buildings were large and lofty, something as European barracks appear from a distance. They are still in excellent preservation, and indeed seem quite perfect and entire; so much so, that during very heavy rains, the villagers take shelter in them. The houses of this ruined city are not built near each other as we see in the present day, but are detached similar to the *bungalows* of officers in India. I could not discover any thing in the shape of carvings, or idols any where about. The ruins of these dwellings are square, and are built of hewn blocks of stone; and are very shapely in appearance, but not very lofty, not being more than six, or under four yards in height. The walls were about half a yard in thickness, and in some places less. Each house contained an area of about six yards. The cement used in joining the stones together is of a black

colour,* but I could not tell whether it was lime, mud, or anything else. Every house has a door, as have the two larger buildings also. These ruins are of Buddhist, not of Grecian architecture; but are like those at Bihí near Pesháwar, which we visited together in December, 1849; and are altogether without verandahs. The large buildings I refer to, as situated on the very brow of the mountains are said to have been built by Suwátís of former times as watch-towers; but in my opinion they are the remains of idol temples, which Hindús often build in such places, as at Purandhar near Poonah in the Dekhan, which I accompanied you to, in 1852. There is no made road leading to these buildings, for they are very near to the open ground of the valley; but, probably, there was once a made road, which has now disappeared. This ruined city is close to the Landdakacy mountain, but the village of Kottah is nearer, and Baríkott is still further off; for this reason I have written "near Kottah instead of Baríkott." This is, no doubt, the ruined city mentioned by the French Colonel Court† as near the last named place, which is a large place, whilst Kottah is but a small village. The ancient ruins in Suwát are situated in such difficult and out-of-the-way places, that it becomes a matter of astonishment to conceive how the inhabitants of them managed to exist, where they obtained water, what they employed themselves on, and how they managed to go in and out; for several of the houses are situated every here and there, on the very peaks of hills; but Suwát does not contain so many ruined sites as writers would lead us to believe.

Proceeding on our route from Kottah, we saw the villages of Nowaey-Kalacy, Abú-wah, Gurataey, Barí-kott, and Shankar-darah. Close to this latter place, there is a tower called Shankar-dár. Shankar, in the Sanskrit language, is one of the names of Siva. It stands on a square base of stone and earth, seven yards in height, and just forty yards in length and breadth, which I myself measured. On this square platform, the tower, which is of stone, joined by the dark coloured cement I before mentioned, stands. I computed the height, from the base, which I had measured, to be about thirty yards, or ninety feet; and I also measured the base, which was twenty-five yards or seventy-five feet in circumference. It is egg-

* Probably bitumen.

† Asiatic Journal of Bengal, for 1839, page 307.



H G Raverty 1862

shaped, as in the annexed sketch; and there is no road by which the summit may be gained, nor did it appear to be hollow inside; but there are small holes just large enough, to all appearance, to admit the hand, every here and there, which seem to have been indented to give light or air. From top to bottom the tower is vaulted like that of the *mihráb* of a mosque, but not so deeply indented or niched that one might place the foot thereon, but about a finger's breadth only; still the vaulted shape could be distinctly traced to the summit. Each niche or recess is about a yard or more in length and breadth; and between each of these there is the hole, before mentioned. As the height increases, the *táks* or niches diminish in proportion. The Afgháns of the neighbouring villages have been removing stones for building purposes from the northern side of the tower, and have built several houses therefrom, hence it has sustained considerable injury on that side. The people tell all sorts of tales about the tower; and all agree that Akhúnd Darwezah, the celebrated saint of the Afgháns, who flourished from the year A. D. 1550 to 1600, gave out, in his lifetime, that this tower contained seven idols, one large, and six smaller ones.

After leaving the village of Shankar-dár we passed Ghálí-gaey, which from some accounts, is said to have been the native village of Durkhána'í, and that her people had taken their flocks to graze in the Báz-darah valley, where Adam Khán met her; and that Adam Khán himself dwelt at Barí-kott. The clan to which Adam belonged is still to be found in Suwát, but Durkhána'í's cannot be so easily determined; for on account of the notoriety of her love for Adam, which these stupid people deem a disgrace, no one would acknowledge her as having belonged to his clan, even were such the case. Some say she was of the Khá'íst-khel, others say it was the Khází-khel, and some say she was of the Rárrnízí tribe. However, there is no doubt but that her husband, Piawaey, was of the Khází-khel, and doubtless Durkhána'í was of the same clan also.

We now reached the village of Mányar, where there are two small ancient towers or *topes* facing each other; and then passed on to Gog-darah, Panjí-grám, and Waddí-grám, which latter place is nine *coss*, or thirteen and half miles from Tárrnah; and here we halted for the remainder of the day.

To the east of this village, on the central summit of a mountain,

there are a great many ruins, consisting of dwellings, and a very large range of buildings like a fortress, enormously lofty, which can be distinctly seen from a long distance. I did not go myself to examine these ruins, because it would have been necessary to have remained at the village for two or three days for the purpose; and to do so, in a country like Suwát, would have raised suspicion, therefore the KHÁN SÁHIB would not consent. I was told, however, that the children of the village, as mischievous in Suwát as in other countries,* had left nothing in the shape of carvings or images within it. There is also an immense cave in the side of one of the mountains, which cannot be entered from below; and from above, even by the aid of ropes, it cannot be reached, or at least, those who have attempted it have not succeeded. I was told by some of the Waddí-grám people, that several persons did once set out to make the attempt, and lowered down a rope, so as to reach the mouth of the cave; but it was not long enough, and they returned. No other attempt appears to have been made. The tale goes, that the cave belonged to the Káfirs of old, who had a secret path or entrance; and having deposited treasures within it, concealed the path and shut it up altogether. Whoever finds that path, will get the treasure.

I saw a few ancient copper coins here, but they were not worth purchasing; and moreover, the Suwátís, particularly the Hindús, say that from every copper coin of the ordinary size, two *máshas* of pure gold can be extracted, worth three rupees or six shillings, which was the price they asked for them. Throughout the whole of Suwát, at present, whenever any old coins are discovered, they are immediately sold to the Hindús or Paranchah traders, who transmit them to their agents at Pesháwar; and on this account, old coins are not easily obtainable, unless a person remain some time. The people of the village also told me, that there had been idols found in the neighbourhood; but they had, as a religious duty, broken them to atoms, and not a remnant of them now remains. Between the village of Mán-yár and Waddí-gram, there is a rudely carved idol by the side of the road, cut out of the white stone of the cliff itself, and in the figure of an old man in a sitting posture. Every one that passes by throws a stone at it; so there is an immense heap of them near.

I examined the whole of the Pushto books of the villages between

[* Cf. *supra*, p. 128. EDS.]

this and Tárrnah, which were chiefly on theology; but at Waddí-grám I found three others—the poem of Yúsuf and Zulíkhá, by Æabd-ul-Kádir Khán; and the poems of Shahái Dalí, and Adam and Durkhánái, by Sadr Khán, his brother, all of which you have copies of already.

On the 23rd August, we left Waddí-gram for Míngowarah, which having passed together with the villages of Kambar and Káttlí, we turnod down the valley of Saiydúgán, which runs in a south-westerly direction, and reached the village of that name, the residence of the Akhúnd of Suwát.

This poor and pious man has been most grossly belied for some years past, by interested parties at Pesháwar, who cram the authorities with lies; and find it easier to lay all disorders which take place on this part of our frontier, at the door of this harmless man, than to the true cause. He has for many years been made out to be the fomenter of all the troubles on the frontier, and to be constantly plotting mischief against us; but those, who have given ear to such falsehoods, have not inquired how much is owing to the grinding tyranny of Hindústání subordinates, and other causes which shall be nameless. I would ask them one question, however,—"How is it that during the year 1849, we had no walls round the cantonment of Pesháwar and no chowkeydárs; yet less robberies and crime occurred than at any time since, except, perhaps, during the mutiny?" If I recollect aright, the assassination of the late Colonel Mackeson was laid at the Akhúnd's door; but the very appearance of the venerable old man is enough to give the lie to such a statement. He has been said, at Pesháwar, to possess the most despotic power over a most fanatical tribe; and even the old miscreant who lately set himself up at Delhí, had it proclaimed, that the poor old Akhúnd was coming to assist him with from 12,000, to 18,000 Gházís at his back. I need scarcely add, that the whole is a mass of falsehood got up by interested parties. I will now endeavour to give a sketch of the Akhúnd as he appeared to us.

On reaching the village of Saiydúgán we proceeded to pay our respects to him. He is a venerable looking old man, of middle height, with a white beard, and is about sixty years of ago; cheerful in disposition, affable to all who approach him, and with a countenance open and serene. He is learned in the whole of the usual sciences studied

by Muhammadans, to the necessary degree that his position in religious matters demands; and has no concern in, or control, whatsoever, over the government of the valley, which is entirely held by the different petty chieftains. What they state at Pesháwar and in the Panjáb, about his collecting armies, going to war, and inciting the Suwátís and others to create disturbances, and enmity against the English, are the most barefaced untruths, got up, solely, by interested parties at Pesháwar, and other places.

If, by chance, any injured or aggrieved persons come and make complaints to him, that this body or that body has injured them, he expostulates with the party complained against, either by going himself, or sending another to expostulate in his name, according to the rank of such party. If the expostulation takes effect, it is well; but if not, the Akhúnd can do no more in the matter.

It is the custom of those of our subjects on the frontier, who may have committed themselves in any way with the authorities, to fly to Suwát, and they come to the Akhúnd, at whose place they remain for two or three days; for it is the most rigidly followed, and most sacredly observed custom amongst all Afghán tribes, which cannot be broken through, to show hospitality to a guest, however unwelcome he may be. But with respect to the Akhúnd's guests of this description, after a few days have passed, he tells them, with all mildness and kindness, that they will not be able to get on in that country; and advises them to go to Kábul or some such place. In short, he leads them to understand, in the most delicate manner possible, that they had better leave his dwelling, at least.

What has been said with regard to thieves, robbers, and murderers from the British territory fleeing to the Akhúnd, and being entertained by him, is as false as the other matters which have been advanced against him, and which those, who have, probably, cast their greedy eyes upon the Suwát valley, with the view of getting it annexed, not considering that we could not keep it, but at great expense and bloodshed, take care to spread. In all countries bordering upon each other, the criminals on either side seek to escape from justice by flying across the respective frontiers, as they did from England to Scotland, and *vice versa*, in former times; and as they do to France and America, in the present day. It is not to be imagined, on this account, that the authorities of those countries

connive at such acts, much less the bishops and priests of those countries. Such too is the case in Suwát. The Akhúnd is high priest or rather a devotee, whom the people regard as a saint, and who is looked upon, by the people of those extensive regions around, as the head of their religion; but he is without the slightest real power, either temporal or spiritual; his influence being solely through the respect in which he is held.

It is in the villages on the outskirts of Suwát, and other places on the border, that bad characters, who have fled from justice, seek shelter, with whom the Akhúnd, as already stated, has no more to do than the man in the moon; but parties, for their own purposes, make use of the Akhúnd's name.

The Suwátí Afgháns are so tyrannical, so prejudiced, and so fanatical, that even the admonitions, and the expostulations of the Akhúnd are unpalatable to them. Whatever they do not like, or whatever may be against the custom of their Afghán nature from time immemorial, they will neither listen, nor attend to. A circumstance which lately happened is a proof of this. A trader of Pesháwar, after great expense of time and money, had caused to be felled, in the hilly district above Suwát, about two thousand pine trees, which, in their rough state, were thrown into the river, for the purpose of being floated down to Pesháwar. When the trader and his people, with their rafts, entered the Suwát boundary, the Suwátís seized them, and would not allow the rafts to proceed. The trader supposing the Akhúnd to have influence, went and complained to him. The Suwátís of Lower Suwát, through fear of their chiefs, with whom the Akhúnd had expostulated about the behaviour of their people, gave up all the trees they had not made use of themselves, and they were not many; but the people of Upper Suwát, that is to say, from Chárbágh to Chúr-rraey, on both sides of the river, would not obey, and did not; and the trees may still be seen, lying about in hundreds, on the river's banks.

With the exception of a few servants, the Akhúnd, whose name is Æabd-ul-ghaffúr, has no followers whatever. He is of the Naikbí Khel (the Naikpee Khail of Elphinstone,) and left Suwát when a mere child. He resided in the Khattak country, at Saráe, at the *zíárat* or shrine of Shaykh Rám-Kar, where he remained as a student of theology until past his thirtieth year; and was so abstinent that

it is said he could scarcely walk a hundred yards from weakness. This I have heard from Muhammad Afzal Khán, Khattak, who has often seen him there. When the Seikhs got the upper hand at Pesháwar, he left the Khattak country and returned to Suwát, and took up his residence at Saiydúgán.

I noticed that the Akhúnd's head shook a little, which unless cured, will probably turn to the disease named *laḳwah* in Arabic, which is a spasmodic distortion of the face.

I had been led to believe from people generally, that the Akhúnd was possessed of some wealth—but it was very little, comparatively, that we saw; and that little was constantly expended,—that he was constantly employed, from morning to night, "with his fanatic subjects plotting in vain,"* and occupied with the world's affairs. Instead of which I beheld a man, who has given up the world, a recluse, perfectly independent of every body; and occupied in the worship of God. Sometimes he comes out of his house for two or three hours daily; sometimes only every other day. At this time people come to pay their respects, the greater number of whom are sick persons. For these he prescribes some remedy, and prays over them, after which he again returns to his closet within his dwelling. If two parties chance to have a dispute, and they both agree that it shall be settled according to the *sharæ* or orthodox law of Muhammad, he explains to them the particular precept bearing on the case, from the Arabic law-books. Save this, he has no connection in the matter.

The food of the Akhúnd is a single cake or bannock of bread, made from the *shamúkah* (*panicum frumentaceum,*) the most bitter and unpleasant grain it is possible to conceive, which he eats in the morning before dawn. He fasts during the day; and in the evening he eats sparingly of boiled vegetables sprinkled with salt. The only luxury he indulges in is tea, made in the English fashion, with milk added, as you yourself take it. About two or three hundred poor persons receive food at his guest-chamber daily; and the animals of those who come from a distance receive a measure of corn and some grass. He pays for all he obtains to feed these parties, in ready

* Rev. J. Cave Browne: "The Punjab and Delhi, in 1857." This author, at page 292 also states, "The Swat valley is inhabited by a warlike and fanatic race of Mahommedans *ruled by a Moulvie of Moulvies*, a patriarch or pope of the Mahommedans of this part of Asia, called the Akhoond of Swat."

money; yet, apparently, he has no income. The offerings of those who come to visit him are applied by his servants to this purpose; and save a few buffaloes, which are gifts from others, from time to time, he possesses but few worldly goods, much less lands or revenues to plot invasion of empires. The milk, even, of the milch buffaloes is given to his guests; and the males are also slaughtered for them. He himself receives no money from chief or noble; but from the poor who visit him, he will receive their small offerings of one or two *piee* (farthings) to please them, and give them confidence.

The Akhúnd has a little garden attached to his dwelling, in which there are a few fruit trees, consisting of pomegranate, peach, fig, *ttángú*,* walnut, and a vine. As the fruits come into season they are gathered, and a small quantity is placed in the guest-chamber or reception-room, daily. To those who express a wish to taste the fruit he gives a little with his own hands. His residence lies in a most healthy and salubrious situation; and close by there is a running stream of cool and clear water. At the head of this stream a small pond has been formed, containing a few fish. There are also several plane and other shady trees about; and it is, altogether, a very pretty place.

The Akhúnd has one wife, and a little boy about eight or nine years of age, and a daughter. On one occasion he was requested, by some of his particular friends, to make some provision for his family, in order, that after his decease, they might be provided for. He replied, "If they are true unto God, all that the world contains is for them; but if they are untrue to Him, the nourishing of them is improper and unjust." Indeed he is so much occupied in his devotions, that he has little time, even to show affection and fondness for his family.†

* The name of a tree bearing a fruit like the apple in appearance.

† "On our northern frontier, in the Swat valley, the laboratory of Mahommedan intrigue, the right hand of the Alchemist was paralysed at the very moment when he had seemed to have attained the grand *eureka* of his life. The *Badshah* whom the wily Akhoond of Swat had raised, in order to gather under the green banner of the prophet every Mahommedan fanatic, and to recover Peshawar over the corpses of the unbelievers,—this creature king *died on the very day* that the tocsin of rebellion was sounded forth from Delhi; and the fanatic fury which was to have overwhelmed Peshawar spent itself in civil war in the Swat valley." Rev. J. Cave Browne, Punjab and Delhi, in 1857. Vol. 2nd, pp. 311. The Badsháh, a priest, not a king, here referred to, did not die for several months after the Delhi massacre.

Such is the true history, and such the faithful portrait of the terrible, fanatic, plotting Akhúnd of Suwát, the bugbear of Peshá-war.

That he made the mutineers of the late 55th Regt. Bengal N. E. Musalmáns is totally untrue. They fled into Suwát, and remained, as travellers generally do, for a few days, as his guests; but, at the end of this time, he advised them to make the best of their way out of Suwát, although Akbar, who is known as the Saiyid Badsháh, wished them to remain. In this case the Akhúnd indeed persisted that they should not be permitted to remain in Suwát; so the rebels set out towards Kashmír, on the road to which they were cut off by the Deputy Commissioner of Hazárah. Other mutineers also came from Murree, all of whom he dismissed as quickly as possible to Kábul.

It is necessary to explain who this so called Badsháh was. He was not an Afghán, but a Saiyid, named Muhammad Akbar Sháh, a native of Satánah (burnt last year by General Sidney Cotton) near Pakhlí, above Attak. Some years since the Akhúnd Sáhib, as the spiritual chief, was requested to appoint a Badsháh, that is to say a Saiyid, *not a king*, for the word means also a great lord or noble, or head man, but as a sort of high-priest, or rather legate, to whom the *zakát* and *aœashar*, certain alms, and a tithe sanctioned by the Kurán, might be legally paid; and who must be a Saiyid. He died about a year since,* on which his son, Mubárak Sháh, wished to be installed in his father's place; but as the Suwátís were not willing to pay tithes, the Akhúnd declined to do so. All Saiyids are called Sháh or Mí'án; and Sháh and Badsháh signify a king also, but here it merely meant a high-priest. At Pesháwar, one hears of Gul, Badsháh, and there is a gate of the city called after him; but it does not follow that he was a king, for no such king ever did exist, any more than Saiyid Akbar Sháh was a king in Suwát. It was the word Sháh, no doubt, which has been magnified into Badsháh, as if the words could not possibly mean anything else than a king!†

* August, 1857.

† On referring to Captain Conolly's "Notes on the Ensofzye Tribes," already referred to, I find, that the king of Suwát, set up specially by the Akhúnd, for the Delhi tragedy, existed twenty years before. I copy Captain Conolly's own words—"The tribes of Booneer and the neighbouring hills, may be said to

The person referred to by Captain Conolly under the name of Murid Sáhib Zádah, was quite a different person to the Akhúnd, and was an inhabitant of the town of Ouch. The word "Ouchand," in the article you refer to* is an error; but is probably intended for the plural of Ouch—Ouchánah, as there are two villages adjoining each other, of this name, which are well known. This person, whom he referred to, has been dead some time. His descendants still live at Ouch, but none of them are any wise remarkable for piety or worth.

To return again after this long digression to the journey before us, after we had paid our respects to the Akhúnd, I wished to proceed on my journey; and as the time of the KHÁN SÁHIB had expired, he made me over to the Saiyid I mentioned on a former occasion, and he also left with me one of his trusty and confidential followers. He himself returned to Pesháwar.

A little higher up the valley of Saiydúgán from this, towards the east, lies the village of Islám-púr which was the residence of Mí-án Núr, the grandson of Akhúnd Darwezah, upon whom Khushhál Khán, the renowned Khattak chief and poet, launched his bitter irony in his *kasídah* or poem on Suwát; and here also, the tomb of the Mí-án may still be seen.

On the 26th August we set out from Saiydúgán, by ascending the *kotal* or Pass of Shámelí, which lies to the north-eastward of the village of Míngawarah, and nearer to the river. This village contains a great number of Hindú inhabitants; so I went there to see whether I could secure any ancient coins. I saw several, but they were not such as I required.

After proceeding a further distance of about three miles, we reached the village of Manglawar, which is situated at the entrance

have no chiefs of any importance, the only individuals possessing influence being a family of Syuds, the descendants of Peer Baba, a celebrated saint, who lived in the time of the Emperor Humaioon.

"Of this family, there are three principal branches amongst the Eusofs. The representatives of the elder and most influential branch are, Syud Azim and Syud Meeah of Tukhtabund, the capital of Booneer, who may be compared to the Abbot Boniface and Sub-friar Eustace of the novel; Syud Azim, the elder, a good-natured, indolent character, having willingly resigned his authority to his more active and talented brother. The second branch is SYUD AKBAR, Meeah, of SITANAH on the Indus; and the third, Syud Russool of Chumla."—*Bengal Asiatic Journal, for* 1840, *page* 929.

* Bengal Asiatic Journal, for 1839, page 929.

of a small valley, of the same name, running to the N. E. At this point also, the river has approached very near to the spur from the mountains, over which lies the Shameli Pass, just referred to, so much so, that there is no passage into the central part of the Suwát valley in the hot months, when the river is at its height, by any other road; but in winter there is a practicable road along the river's bank. I examined all the Pushto books in this village which I could get hold of, but they were all on divinity, and not one with which you are not acquainted; such as Makhzan-ul-Islám, Fawá'id-ush-sharrí'ah, Jannat-i-Fardous, Durr-i-Majális, &c. At this place also there are some ruins on the mountains to the east, but they are few, and can only be distinctly traced on ascending the mountains; but there are no houses or walls standing.

Manglawar, also, is very pleasantly situated, with streams from the mountains running past it, together with a great number of umbrageous plane trees like those at Tárrnah. Here also I obtained a copper coin, which I bought.

Proceeding onwards we reached the village of Chhár-bágh, and made inquiry after the principal books I had come purposely to seek, in the houses of the Míáns or Saiyids; but those I sought were not forthcoming. Continuing our journey for about four and half miles, in a direction between north and west from Chhár-bágh, on the river's bank, we reached the Kábul-grám, about four and half miles further on, and thence onwards, passing several small *bánddas* or hamlets, we reached Khúzah Khel, where we stayed the night; and I again made inquiries about Pushto books, but could obtain nothing new. The air at this place was very chilly; and the valley began to contract very considerably. There were no Hindús in the village; and the Paránchas were the only tradespeople and shop-keepers to be found so far towards the upper part of the valley. Here the rice fields, too, ceased; for the banks of the river began to get very high and steep. The land on which this village stands, as well as others on the left bank, facing the north, is high. Some are situated on a spur from the hills, and others on more level ground, or on small plains, at the very skirt of the hills; but the ground is not level until the river's banks are reached; for the land resembles the back of a fish. The banks of the river, on both sides, sometimes slope down to the water's edge, sometimes are steep and scarped

like a wall almost, but not often. Where steep, the height of the banks is about eighteen or twenty feet from the water; but the ground, on which the villages generally are situated, is about half a mile or so from the banks, and is generally from one hundred to one hundred and fifty feet about the level of the water, but sloping gradually downwards.

On the morning of the 27th August, we again set out up the valley; and passing the villages of Sherrn-i-bálá and Sherrn-i-pá'ín, and Khúnah, we reached Petaey and Binwarrí. At Petaey we found it so excessively cold, that one could not drink the water with any degree of comfort. I ventured to enter the river for a few paces, but soon had to come out; and was glad to stand in the sun, on the rocks, to get warmth into my feet again. The people were sitting in the sun for warmth; and all slept inside at night, it being too cold to sleep outside, although this was the month of August, the hottest in the Pesháwar valley. I saw snow on the mountains about ten or twelve miles off.

At this village I also, for the first time, met some of the people of the mountain districts to the north of Suwát, together with some of the Gilgitt people also, who had come here to purchase salt. They were all clothed in thick woollen garments, coats, trowsers, caps and all, but wore sandals on their feet. They were, in appearance, something like the people of Badakhshan; and although, to look at, not very powerfully built, yet they carry loads equal to that of an ox of this country (Pesháwar and the Panjáb). I could not understand any of the words of their language,* save that they called salt *lún* which is Sanskrit लवण. The salt is brought here by the Khattaks from their own country, for sale; and the people of the Kohistán, to the north, near which Petaey is situated, come down as far as this place to purchase it.

In the vicinity of this village the peculiar gravel called *charata'í*, before referred to, is found in great quantities. The people called it *gítta'í*, which is Pushto for gravel in general. Here too, the valley is not more than half an English mile across, even if so wide; and the banks of the river are very high. The fields are few, and the extent of cultivation insignificant.

* The writer is well versed in Urdú and Pushto, and Persian is his native tongue.

There are more mills in this part of the valley than in any other part of Suwát. Great quantities of honey are produced here also. The Suwátís make dwellings or hives for their bees, and take great care of them. The hives are thus made. They place a large earthen pot in a *ták* or niche in the wall of the house, with the bottom of the pot towards the outside part of the wall, and the mouth level with the interior part of the wall of the house. They then plaster all around with mud, so that the pot may not fall out of the niche. The mouth is then closed with mud, that the bees may enter from the hole made for them in the bottom of the pot, which is turned outside. When the pot is well stored with honey, the bees having taken up their residence in it, the mouth of the pot, which has been closed with mud is re-opened from the interior of the house, and a piece of burning cow-dung, that smokes, is applied thereto. On this the bees go out, and then the hand is inserted, and the honey removed; but some of the comb is allowed to remain for the bees. The mouth of the pot is then closed up again.

Scarfs called *shálaka'í* both white and black, are woven here in great numbers, which are exported for sale to Pesháwar and other parts. This part of Suwát is also famous for its fruit, every description of which comes into season earlier in this vicinity than in any other part of the valley.

The complexion of the people of Upper Suwát is quite different to that of the people lower down the valley; and the men are generally fair and good-looking. I also saw some females of Káshkár, and the Kohistán, to the north of Suwát, at this village, who were very handsome indeed. The women of the villages, along the river, in this part of Suwát, go out every morning to bathe, during the summer months; and numerous bathing machines have been built for their convenience. These consist of four walls of mud, or mud and stone, and of sufficient height to conceal the bathers. The men, also, use them; but they are intended for the exclusive use of females in the mornings. These places are called *chár chobaey*.

The villages in this portion of Suwát are much smaller and more scattered than in the central parts of the valley; and the people of each village are generally at feud with each other; and, consequently, little or no intercourse takes place between them.

I should mention in this place, that from Tárrnah to Chhár-bágh

the ground rises gradually, and thence to Khúzah Khel still more so; and that at every hundred paces almost, the difference can be distinguished.

From Petaey we proeeeded onwards about three miles to Pí'á, the ground rising eonsiderably and abruptly until we came to this village, the last held by the Yúsufzí Afgháns in the northern extremity of the Suwát valley, which here terminates. Beyond the country is called the Kohistán, which is, however, the Persian word for Highlands; generally used throughout most parts of Central Asia to designate all mountainous tracts. Between this and Petaey also, the river foams and boils along with great impetuosity; and is more considerable than the Arghandáb river, near Kandahár, even when at its greatest power and volume.

About four or five miles further up the valley, beyond the Yúsufzí boundary, there are a few hamlets, the two principal of which are ealled Chur-rra'í, on this bank, and Tírátaey on the opposite side. These villages are inhabited by the deseendants of the celebrated Akhúnd Darwezah, the great saint of the Afgháns, and successful opponent of Pír Roshán, the founder of the Roshánián sect. It appears that the whole of Suwát, as far north as Pí'á, was conquered in Shaykh Malí's time; but these few villages just referred to, were aequired from the Káfirs (as all people are termed by the Afgháns, who are not of the same faith as themselves) about a hundred and fifty years after, in the time of Akhúnd Karún Dád, son of Akhúnd Darwezah. At the capture of Tírátaey Karún Dád lost his life.

I was informed by the people here, that some years since, a number of dead bodies were discovered, buried in a mound at the side of a hill, near Tírátaey. The bodies were quite perfect as if but recently dead; and had been buried with their arms, consisting of bows and arrows, axes, and swords. They were removed and re-interred along with their weapons, in some conseerated spot. When I heard this, the thought struek me that you would desire to possess speeimens of these arms, but I could not obtain any without having one of these burying places opened, whieh, amongst such bigoted people, was dangerous and impraeticable.

The people of Tírátaey also told me, that they possess the body of Akhúnd Karún Dád; whilst the people of the village of Kánjúán affirm that when he fell fighting against the Káfirs, he was buried

in their village. The reply of the Tírátaey's to this is, that they stole the body from Kánjúán, and carried it off to their own village and buried it there. All such statements as these are solely for their own interested purposes, in order to enable them to peel off the skin and flesh of poor people, in the shape of offerings at the shrines.

Having now reached the boundary or extremity of Upper Suwát, beyond which I could not then penetrate, we began to prepare to cross the river, and return home by the opposite bank; but before giving an account of our homeward journey, I will here give you the information I gained respecting the country beyond, up to the source of the Suwát river, which I obtained from an intelligent Afghán who passed several years there.

After leaving Pí'á, the boundary of Upper Suwát, the first village is that of Chúr-rra'í, beyond which the Pushto or Afghán language ceases to be spoken, and the Kohistání language is used. The first village is Birán-yál inhabited by Tor-wáls, which is situated on the left or western bank of the Kohistán river as the river of Suwát is also termed. The distance between this village of Birán-yál and the village of Chúr-rra'í is about eight miles, from the first of which the Kohistán may be said to commence. The people here too understand Pushto. From this to the extremity of the valley, at the mountain of Sar-dzáey, is a distance of seventy-five miles; but the valley is so narrow that a stone thrown from one side reaches the other; in short it is about a bow-shot across. The whole of this space is occupied by two tribes; first the Tor-wáls, sometimes also called Rúd-báris; and above them again, the Gárwí tribe. The amount of the former is about 9,000 adult males, and the Gárwís about 3,000. Hence it will be seen, that this district is densely populated. The villages inhabited by Tor-wáls, from south to north, are; Birán-yál, to the west of the river, eight miles from Chúr-rra'í; Haranaey, to the east of the river, about twelve miles from Chúr-rra'í; Cham, to the west of the river; Gornaey, to the east of the river; Chawat-grám, to the west; Rámett, to the east; Chúkíl, to the east; Ajrú-kalaey, to the west; and Mán-kiál, to the east,—these belong to the Tor-wál tribe; and Pash-mál, to the west; Har-yání, to the east; Ilá-hí-kott, to the west; Ushú, to the east; Kálám, to the west; and Utrorr, to the west, belong to the Gárwí tribe. After this, still proceeding north, are the three villages of the

Gújars, called the *Bánddahs* of the Gújarán, one of which is Sar-bánddah, inhabited by about fifty families. It is close beneath the mountain of Sar-dzáey, the barrier closing the extremity of the valley to the north. The three villages contain, altogether, about six hundred houses.

A short distance to the south of Sar-bánddah, there is a marshy, meadow-like plain of some extent, probably about fifteen jaríbs of land.* This is called Jal-gah. This term is evidently derived from Sanskrit and Persian; the first being जल water, and the second گاہ a place, "the place of water or streams." The rivulets issuing from this meadow having collected together, flow downwards towards the south; and this Jal-gah is the source of the Suwát river, which, united with the Indus, and the Panjab rivers, at last, pours its water from scores of mouths into the mighty ocean at Kurrachee, (or more correctly Karáchí) in Sindh, after a course of some fifteen hundred miles!

Flowing south, the stream, called the water of Jal-gah, enters the boundary of the Gárwí tribe; and thence flows on to Ut-rorr, which lies on its western bank. Thence under the name of the river of Ut-rorr it flows down opposite to the entrance of the *darah* of U'shú with its river, lying in a north-easterly direction, and unites with that stream near the village of Kálám, also on the western bank. Still lower down it receives the river of Chá-yal running through the *darah* or valley of that name, lying in a south-westerly direction, near the village of Shá-grám on the western bank. East of the Ut-rorr river, as it is termed from Shá-grám downwards, and about half a mile lower is the village of Chúr-rra'í, where its name again changes; and it is then known as the *sind*,† or river of Kohistán. On reaching the villages of Pí'á and Tírátaey, it receives the name of the Suwát river, having during its course received, little by little, the small rivulets on either side.

At the extreme head of the valley, near the mountain of Sar-dzáey there is a Pass leading into Káshkár; another road leads through the *darah* of Ushú, on the eastern side, into Gilgitt; and another leading into Panjkorah through the Chá-yal *darah*.

* A jarib of land is sixty yards in length and breadth.

† A Sanskrit word, used in Pushto.

Throughout the whole of this valley, from Sar-bánddah to the boundary of Upper Suwát, there are immense numbers of trees, both along the river's banks, and on the mountains on either side, to their very summits. The trees mentioned as having been seized by the Suwátís, in a former paragraph, were felled in this valley, to be floated down to Pesháwár. I saw one of the party who had gone to fetch them, and he informed me that trees, some of which were large pines, only cost, in felling, from three-pence to two shillings each.

The wild animals of this upper portion of the valley of the Suwát river are numerous; consisting of tigers,* bears, and monkeys, in great numbers, particularly the latter; wild boars, gazelles, a large species of deer, wild bulls, hares, foxes, wolves, and jackals without number. The mountain sheep is also common, as well as the musk-deer, called *rámúsí* by the Afgháns and Kohistánís.

The flocks and herds consist of bullocks, cows, sheep, mules, and numbers of goats. There are also hogs, *brorrahs*, (a species of wood-louse), and fleas in swarms. Indeed it is said the fleas of this part are more numerous than those of Suwát, from which, Heaven defend us!

The dress of the Kohistánís consists of garments woven wholly from *pashm*, the peculiar wool or fur of these parts, with which several animals are provided. They do not wear shoes, but twist strips of the leather of cows or goats about the feet and legs as far as the knee, but the feet are protected by sandals, the two great-toes being left bare. The women dress similarly to the men, with the exception of the covering for the legs.

The people are very fair and comely; and the women, who go about unveiled, are very handsome.

The cultivation depends upon rain. They do not use the plough, but a kind of hoe or mattock, to turn up the land with, or otherwise make holes in the ground, into which the seed is inserted. Wheat and barley are by no means plentiful; but *joárí* (holcus sorgum) is.

Fruit is more abundant in the Kohistán than in Suwát, but much of the same description. The winter is severe; and snow falls in great quantities.

The Suwátís import grain; and thread, needles, and coarse blue cotton cloths from Pesháwar; and salt from the Khattak country is imported into the Kohistán.

* Leopards probably.

The following customs are observed as regards hospitality. Whenever a guest, that is to say a traveller in general, or a stranger, reaches the *hujrah*, or apartment set apart for the reception of guests, in the same manner as throughout Afghánistán, it is necessary that one of the attendants who has charge, should warn the person in the village, whose turn it is to supply the guest with victuals; for all have to do so in turn. If the guests should require more than this person has it in his power to furnish, the next party, whose turn may follow, is also warned to supply the guests. Should a great man arrive, such as a Khan or Chief, or a Saiyid, or the like, with twenty or thirty persons in his train, the kettle drum at the *hujrah* is beaten to give notice that lots of meat and clarified butter are required for their use. On this every person who has any meat of rather too high a flavour to be very palatable to himself, gives due notice that he has some; and this is either taken to the *hujrah* to be cooked, or the person who supplies it, cooks it, and sends it to the *hujrah* for the use of the guests. They do not eat fresh meat in the Kohistán, but leave it to hang until it becomes very high,* or almost rotten, and then cook it. Fresh meat, they say, is the food, not of men, but of ravenous beasts.

After this long digression we may now return to Pi'á, the northernmost village in Upper Suwát.

As there was no raft at this place, (for such a thing as a boat is not known) we had to return our steps down the river, a short distance, to Banawrrí where we found one, and crossed over to the village of Landdaey, which is about two hundred paces from the right bank, the breadth of the stream at this ferry being about one hundred yards. The banks were very steep here, and the river was very deep. I observed that where the river was deep, the banks were steep and scarped; but where the water spread out, the banks were like the sea-shore, more sloping, and gravelly.

Having now reached the opposite bank, we began our journey homewards through that part of Suwát lying on the right bank of the river, and known by the name of *lánwdah* or the moist. On the 30th August we left Landdaey, where I obtained a copper coin which seemed something new, and proceeded to the village of Darwesh Khel-i-Bálá or the higher, about eight miles distant, passing

* Like game amongst the fashionables of England.

several small *bánddahs* or hamlets of four or five houses by the way. The ground all along our route, which lay at the skirt of the mountains, was very irregular and hilly; and the cultivation was very scanty. A rivulet runs through this village, which is shaded by a number of fine trees, under whose shade there are mosques, and *hujrahs* (cells or closets they may be termed) for *tálibs* or students, of whom many come here to study; and, altogether, it is a very picturesque and pleasant spot. At this place we were very much distressed and annoyed by the Malik or headman, and a Mullá or priest, both Suwátís. The Malik wished to take away my clothes and papers; and the Mullá ordered me to show my papers to him. There is no doubt but, that, in case I had shown him my papers, and he had seen what was contained in them respecting Suwát, we should have been all three lost. By great good luck, however, some guests happened to arrive just at the time, and occupied the whole of our persecutors' attention. This we took advantage of, to make ourselves scarce with all speed, and reached Darwesh Khel-i-Pá'ín or the lower, some distance from the other village. Here we halted for some time to rest ourselves; and I made inquiry about books and old coins, but without success. I found that the *Shálaka'í* or woollen scarfs I before alluded to, both white, black, and flowered, are manufactured at these two villages, just mentioned. We proceeded from thence to Banbá Khelah, which faces another village called Khúzah Khelah, distant about a mile and half on the opposite bank. Most of the villages in Suwát can be seen from each other, save a very few, such as Khazánah, and Garraey, which lie to the west of the spur of Súe-galí; and Saiydúgán, and Islámpúr, which are situated in the *darah* or valley bearing the latter name; for, in the whole of the centre of Suwát, there is neither mound nor hill to obstruct the view. It is indeed, a most picturesque valley; in the centre is the river branching out with the green fields swelling gently upwards, on both sides, until they melt, as it were, into the lower hills. Here I obtained two square copper coins, duplicates, but the impressions were distinct.* I was told on inquiry, that when the people go to the hills for grass, they search about for old coins, near the ruins they may pass, or sometimes they go purposely to search for them, and dispose of what they find to the Hindús.

* Coins of Apolodotus.

Passing this place, we came to Banbá Khel-i-Pá'ín, or the lower; and from thence went on to Saubat and Kharerra'í, the people of which were at feud, and were fighting amongst each other. On reaching Shakar-darah in the evening, we were told that they had, that day, lost some twenty, in killed and wounded, on both sides. After staying for the night at Shakar-darah, on the morning of the 31st August we set out from thence, and proceeding through the pass of Nún-galí over the spur, (consisting of earth mixed with rocks and stones, containing something of a yellow colour,) which juts out abruptly for about three quarters of a mile, to one of the branches of the river, from the mountains on our right hand, we again descended to the village of Nún-galí, which lies under the southern side of this spur near the river, and just opposite to Chhár-bágh on the other side, which can be distinctly seen. Passing on from this village, we came to Bánddí-i-Bálá, and Bánddí-i-Pá'ín the former of which after Tárrnah and Munglawar, is the largest place in Suwát. Leaving these we passed on to Kánjú-án, where the shrine of Akhúnd Karún Dád, son of Akhúnd Darwezah, is situated, and to which I went to pray. Continuing our journey we came to Damghár, and Díw-lí; and then went on to Akhúnd Kalaey,* where is the tomb of Akhúnd Kásim, author of the Fawá'íd-ush-Sharríæat.† His descendants still dwell here. Damghár is the place mentioned by Khushhál Khán, in his "Ode to Spring," which is contained in your translations of Afghán poetry.‡ We now proceeded onwards through the Súe-galí Pass, towards the mountain of Súe-galí, another spur from the same mountains, which juts out towards one of the branches of the river, and then, for a short distance, turns abruptly to the south. The length of the *kotal* or pass is about twelve miles, the first three of which was a pretty good road; the next three miles are very difficult; and the remaining six, as we had to descend, were not so very difficult, but would have been so to ascend. The air was so cool and pleasant, that we accomplished this difficult journey between ten in the morning and three in the afternoon, the hottest part of the day, without experiencing any inconvenience from the sun,

* Kalaey is the Pushto for village.

† The title of a celebrated Pushto work, part of which will be found in my Gulshan-i-Roh.

‡ "Selections from the Poetry of the Afgháns, translated from the original Pushto:" London: Williams and Norgate, 1862.

although we were on foot and brought no water with us; and this too on the last day of August, the hottest of the hot months in the Panjáb and at Pesháwar. On ascending the Pass, and about two and half miles from the commencement of the ascent, we came to a *zíárat* or shrine, with a rivulet running past it, and shaded by fine zaitún or wild olive trees, an immense forest of which, the largest in the whole of Suwát, and reaching to the summits of the mountains, here commences. On reaching the crest of the Pass, and looking downwards we could see the village of Garraey, which we passed, and proceeded on to Khazánah, the men of which are the strongest in Suwát. At this place also, we met a very pretty young woman, who, I remarked to my companions, was the first good-looking one I had seen in the Suwát valley. We still proceeded onwards, and reached Zírah Khel, which lies just opposite to the Sanddakaey mountain on the other side of the river. From thence we went on to Ouch-i-Bálá, and Ouch-i-Pá'ín, both of which villages, lying close to each other, are situated just inside a long narrow valley, containing water, through which a road, which is always open, leads into Bájawrr. There is another road by way of Lower Suwát, but this one is preferred.

Here we passed the night in company with a *káfilah* or caravan of Khattak traders; and in the morning, which was the 1st September, we were conveyed across the river from the ferry near the village of Chak-darah, where Kokal-tásh, the general of the Mughal Emperor Akbar, built a fort to overcome the Yúsufzis of Suwát, to Allah-ddandd, thus leaving the *láwndah* or moist part of Suwát, and entered once more the *wuchah* or dry district. There were no traces of ancient ruins near the former village.

Allah-ddandd is the residence of the chief of the Rárrnízí branch of the Yúsufzí tribe, and the residence of the chief, Sher-dil Khán, son of Æinayat-ullah Khan (mentioned by Conolly in his notes on the Yúsufzís). He is a young man about twenty-three years of age, and is a lineal descendant of Khán Kajú, or more properly Kachú, the chief of nine *laks** of spear-men, in the days of Sher Sháh, Lúdhí, Emperor of Hindústán, and the author of a valuable history of the conquest of Suwát by his tribe, some few years previously. Notwithstanding his proud descent, however, and that Afgháns, generally,

* A *lak* is 100,000.

are so well versed in their own genealogical lore as to be able to relate their descent *vivâ voce*, for five hundred years or more, this chief does not know the names of his ancestors, nor the number of generations between Khán Kachú and himself! After this specimen, it is not very astonishing, that Mír Ælam, Chief of Tárrnah, did not know how he stood with regard to Hamzah Khán, his own great ancestor.

From the writings of Khushhál Khán, the renowned chief of the Khattaks, in the reign of Sháh Jahán and Aurangzeb his son, we find that the descendants of Khán Kachú were several times dispersed; hence their present comparative diminution of power, and smallness of territory, and want of worldly goods.

The most celebrated and powerful chiefs of Suwát, indeed the two families who exercise the chief power over the whole valley, are those of Tárrnah, already mentioned, and the chief just named; otherwise all Afgháns are Kháns, particularly when from home, or on their travels. My business here, too, as you are aware, lay more with Mullás; and I endeavoured to avoid the chiefs as much as possible. At Allah-ddandd, however, Suhbat Khán, son of Hukamat Khán, Shér Dil Khán's brother, has also a portion of the Rarrnzí country; but he is four or five years older than his nephew, who is the chief of this branch of the Yúsufzí tribe.

The tomb of Khán Kachú is at Allah-ddandd, also that of the famous Malik Ahmad, who took so prominent a part in the affairs of the Yúsufzís, from the time of their being expelled from Kábul by Mír Ulagh Beg, grandson of Tímúr-i-lang, up to the time of their conquest of Suwát and Panjkorah, and other districts about Peshá-war, which some have stated to have been theirs, already in Alexander's day.* I could not discover any thing about Shaykh

* Major J. Abbott in his "Gradus ad Aornos," (Journal for 1854,) quoting Arrian, with reference to the seige of Massaga, states: "The enemy had 7,000 mercenary troops of the neighbouring districts *(the Rohillas, probably, who still swarm in that neighbourhood.*" Again: "By the 3rd and most obvious route crossing the Nagooman at Lalpoor, he would have threaded the Caroppa Pass, have entered and conquered the Doaba of Shub-gudr, have crossed at Ashtnugr the river of the *Eusufzyes, or as they still call themselves, Asupzye, Aspasioi, i. e. the Issupqwur*, and would have found himself in the country of *the Aspasioi!*" Surely Major Abbott knows that ROHILLAHS *are* AFGHÁNS, *and that their country is called* ROH; and if the Yúsufzís only reached Kábul in Ulagh Beg's days, and years after conquered Pesháwar and Suwát, it is evident they could not have been there in Alexander's days, any more than the Normans, who conquered the Saxons at Hastings, could have been in England, in the days of Julius Cæsar.

Malí, or his descendants. I here heard, however, that the book I was in search of, and for which I had chiefly undertaken this journey—"The History of the Conquest of Suwát," by Shaykh Malí—was in the possession of Mí-án Ghulám Muhammad of Tsaná-kott, and that whenever there is any dispute between families, respecting the right to lands, they get the book, which contains an account of the distribution of the whole of Suwát by the Shaykh and Malik Ahmad, at the conquest; and as the book shows they agree to without further dispute. I was quite elated at this piece of good news, and wished to set out forthwith for Lower Suwát; but those who accompanied me did not agree, as they had no acquaintances there; and, moreover, that part of the country was in a disturbed state. I urged upon them that we had but eight or nine miles remaining, which we could get over in a few hours; but, all I could do, I could not induce them to go. Having no help for it, I dismissed the Suwátís who had accompanied us so far, and set out with Nek Muhammad, the confidential clansman whom the Khán Sáhib left with me, and proceeded towards Butt Khel, and thence passed on to the village of Shair. Here I took counsel of my trusty companion, and proposed that we should proceed alone, to Tsaná-kott. He said he would go wherever I wished, but he had one thing to mention, and that was, as follows. "In the first place, we have no excuse to make for this journey, if obstructed or annoyed. We could not state that we are going to pay our respects to the Akhúnd, or that we are students going to read with some teacher in his vicinity. Here such excuses are not likely to be listened to, and trading would be the only plea available; whilst, at the same time, we have no goods to trade with. The best way to put off this new journey for another opportunity, when the Khán Sáhib has promised to accompany you for a period of two months, and then we can see all the country." This advice of my companion was sound, and I acted accordingly; so we set out on our return to Pesháwar by the Mala-kand Pass.

This Pass is much less difficult than that of Morah, by which we entered Suwát. About half way up the northern side of the Pass there is a spring of cool and pure water, round which the spikenard plants flourish most luxuriantly; indeed, throughout Suwát, wherever there were springs or rivulets, I observed they were surrounded by

these beautiful plants. The mountains round this part of Suwát are, also, more densely wooded, than about the Morey Pass, with forests of pine and *zaitún* or wild olive. On the summit of the Pass there is a large open plain, and here there are several *kandahs* or trenches in which a number of bodies have been buried. I have been informed, that there are fissures in many parts of these *kandahs*, where hundreds of sculls may be seen, as also arrows, swords, knives, &c. It would appear that some great battle had been fought here when the Yúsufzís first invaded the country, and that the slain were buried on the field of battle; and what is more natural than to suppose that the people took post in the Malakand Pass, to resist the invaders?* On the southern side there are no rivulets; and no water is procurable, save from two wells which have been dug between the village of Dar-gaey and the foot of the Pass. Near one of these wells there is another road, apparently very ancient, over Malakand, the whole of which to within a short distance of the summit, is built up with slabs of stone and lime; but like that of Khandállah, between Bombay and Poonah, it has many turnings and zig-zags, and thus appears to have been scientifically designed; but although it is the shortest way, with all its turnings, the Afgháns prefer using the other road.

They say, that there is another road into Suwát, still easier, by the Sháh-kott Pass, which is comparatively straight and level; and appears to have been a regular made road, probably the work of the former inhabitants of these regions, who, from the ruins that still remain, appear to have attained a considerable degree of civilization. Guns could easily be taken into Suwát by this route; but the Afgháns, apparently, to provide against such a contingency, have broken up the road in several places; and at present it is never used.

There is no place named Kandárak, at the foot of the Karakarr Pass into Suwát, to be found at present; but the ruins of a village, or something of the kind, may be traced. Perhaps this is the place referred to in the Akbar Námah, the scene of the defeat of Akbar's army by the Yúsufzí Afgháns. I was informed, that about three years since,

* The history of the Yúsufzís and the account of the conquest of Suwát I have found in a work in the Library of the India House; written however in a most strange manner, in Pushto and Persian. The author was an Afghán; and he goes on to relate in Persian, and then all at once breaks into Pushto and *vice versa*.

three Afgháns found a phial, or something of the kind, near this place, the mouth of which was closed with lead, and contained several seals regularly cut. They appear to have been glass or crystal. An iron oven was also found at the same time. The Suwátís say, that the army of the Mughals were defeated in the Sháh-kott Pass; and will not allow that Akbar's army ever entered Suwát itself. I was equally unsuccessful regarding the other places mentioned in the history referred to, viz.; Iltimsh, Saranyakh, and Kandárí. I imagine they must have been more to the north-west, towards Káfiristán.

On reaching the foot of the Pass we went on to Dar-gaey three miles distant; and thence proceeded to Sháh-kott, about two miles further. We had now entered the British territory; so I went on direct to Pesháwar: and here ended my travels in Suwát.

I must now attempt to describe the features of the valley.

On descending from the Mohrey Pass, and issuing from the narrow valley in which Nalbánddah lies, towards Tárrnah, the Suwát valley appears to lie almost east and west. It then makes a bend in a north-easterly direction as far as the Pass of Shámelí; and from thence to Pí'á the direction is almost due north; and beyond Pí'á again up to the source of the Suwát river, at the *Jal-gah*, it diverges slightly more in an easterly direction. It will therefore be seen, that the Suwát valley is divided, as it were, into three natural divisions; and where the three turns, above mentioned, commence, the valley gradually narrows by the mountains on each side converging together, and then opens out again by their receding. The river intersects the valley throughout, with occasional considerable bendings; but the several maps you have are incorrect,—indeed, almost wholly so as regards the country beyond the Mohrey Pass. The map in Elphinstone Sáhib's book, is better. The mistake is, that the valley in all these maps, is made to run, almost in a straight line north-east, and south-west; and from them it would appear, that a person standing at tht highest part of the valley could see down straight through it, which is far from being the case.* The river receives a few considerable streams, as has been previously stated, together with many small rivulets, from the mountains on either

* The accompanying rough map is based on Lieut. (now Major) J. T. Walker's, as far as the Mohrey Pass, which he has so far surveyed.

side. From Chúr-rraey to Binwarrí, which was the nearest point towards its source which I visited, the stream is about a hundred yards broad, very swift, and violent. From about five miles lower down than Binwarrí it becomes somewhat wider, but is just as rapid and violent as before, till it reaches Darwesh Khel, about three-quarters of a mile lower down than which, where the valley also opens out considerably, it becomes much broader, and divides into several branches, and so continues until it reaches Allah-ddandd in Lower Suwát, where the branches again unite. From thence the river becomes narrower, until it joins the Malízí river (the river of Panjkorah of the maps), near the village of Khwadar-zí, in the country of the Utman Khel.

No gold is found in the river or its smaller tributaries, unless it be at their sources; and there are few or no trees on the river's banks, in the whole of the lower parts of the Suwát valley, not a hundred altogether I should say, save in the smaller valleys running at right angles to it. Here and there, one or two may be seen, in fields near the banks, under which the peasants rest themselves, and take their food in the hottest part of the day. It is in the mountains, on the sides of the valley, that trees are numerous.

The mountains on either side as seen from the broadest part of the valley constituting Lower Suwát are of different degrees of elevation. The first, or lower ranges, are of no great height, and of gentle ascent; and the second are rather more abrupt; and on these there are, comparatively, few trees, but much grass. The third or higher ranges appear like a wall; and that to the north is densely covered with pine forests, which are seen overtopping all.

Firewood is scarce in the lower parts of the valley, and the dry dung of animals is used instead; but in those smaller valleys at right angles to, and opening out into that of Suwát, there are woods and thickets enough. There are no shrubs or wild trees, such as we call jungle in India, in any part of Lower Suwát, save in these smaller valleys, and in the higher ranges which I did not reach; and therefore I cannot speak confidently on that subject.

The Suwát valley, not including the Kohistán north of Pí'á, is, according to Shaykh Malí's arrangement, divided into two parts, known as *bar* or Upper, and *lar* or Lower Suwát, which two divisions are thus defined. From Mányár to the village of Túkakán towards

the mouth of the river, it is termed Lower Suwát; and from Mányár northwards to Pí'á is Upper Suwát. Lower Suwát is hot, and produces little in the shape of fruit, but grows plenty of rice; has numerous villages; and is densely populated. Upper Suwát again is cold, and the climate temperate; but it has few rice-fields; produces much fruit; but has fewer villages, and is less densely populated than the other part of the valley. I heard of no part termed middle Suwát, which you say is mentioned in Elphinstone's book, and those of others; the only divisions beyond the two I have named are not recognized, unless we take the boundaries of tribes and *khels* as such; but the people of a country know best about such matters; and I have stated accordingly. No Suwátí would know what middle Suwát means.

In Lower Suwát rice is extensively cultivated, whilst in Upper Suwát, wheat, barley, and *bájrí* are the chief grains. As regards temperature and excellence of climate, picturesque beauty, fruits, and game, Upper Suwát, from Munglawar to Chúr-rraey, which I saw myself, is by far the best. The Kohistán beyond is much the same The whole of the upper portion of the valley is intersected, at right angles, by the most picturesque little vales, of about half a mile or less in extent, the very residence in which would be sufficient to make a man happy. Each has its own clear stream running through, towards the main river; and their banks, on either side, are shaded with fine trees, many of which bear the finest fruit, and beneath which, every here and there, there are fragments of rock where one may sit down. The hills on both sides, up to the very summits, are clothed with forests of pine, whose tops yield a most fragrant smell. Dust is never seen.

The Suwátís, of Lower Suwát sow all the available land near the river with rice; and that nearer to the hills with *joárí* (*holcus sorgum*), cotton, tobacco, *másh* (*phaseolus max*), *úrrd* (*phaseolus mungo*), and *pález*, consisting of melons and the like. The higher ground, still nearer the hills, they have appropriated to their villages and burying-grounds; and numbers of villages, for this reason, have been built close to the hills. However, where the river, in its windings, encroaches more on one side than the other, that is to say, when the river approaches the hills on the right, or *lánwdah* side of the valley, the left, or *wuchah* side is more open and expansive; and

here the villages will be found lower down towards the centre of the valley. These villages lying lower down have from the windings of the river, and the different branches into which it separates as already stated, streams of water running through them, very often, indeed, more than there is any need of. The villages at the foot of the different hills also, have, generally, small streams flowing close by towards the main river.

From Allah-ddandd to Chhár-bágh on the *wuchah* side of the valley; and from Chak-darah to Bánddí on the *lánwdah*, which places face each other, the villages are small and very close together; whilst lower down the valley towards the south-west, and higher up towards the north-east, the villages are larger, and at a greater distance apart, often from two to three miles.

In the more elevated parts of the valley, where rice is not cultivated, the land lying between the villages and the rise of the mountains, is set apart for wheat and barley, and is dependent entirely on rain for irrigation.

The Afghán tribes, like all Muhammadans, have a great respect for the last resting-places of their own dead, at least; but the Suwátís seem to feel little compunction or respect on this head. I have already mentioned that the strip of land lying between the villages and the rise of the mountains, is set apart for the cultivation of wheat and barley, and that, in that land also, their burying grounds are situated. After a few years they allow these fields to lie fallow for some time and plough up all the burying grounds, and, in future, bury the dead in the fallow land! This may be consequent on the small quantity of land available for purposes of agriculture; but still, it appears a very horrible custom.

On such occasions as I have referred to, they get as many ploughs together as the village contains; and preparatory to the commencement of operations, it is customary to cry out to the dead: "Look to yourselves! tuck up your legs: the plough is coming!" after which they set to work and plough up the whole. They, however, appear to have some respect for persons who may have been of any repute among them, and do not disturb their graves; neither do they disturb the graves of those who may have been slain whilst fighting against the Káfirs or infidels; for such are held in the light of martyrs.

There appears to me to be no particular reason why the graveyards should be disturbed, in this manner, save on account of the paucity of land for such a large population, and the avarice of the Suwátí Afgháns; for they have more grain than they can consume, since they export large quantities. Another reason may be their stupidity; and a third, that they are of so many different clans, and do not respect the dead of others as much as their own. When the lands are re-distributed, and a clan removes to another place, the new-comers do not consider the dead as theirs, and hence show no compunction about disturbing them. With my own eyes I saw ploughs which were just passing over a grave. I asked those who were guiding them: "Why do you thus disturb the dead in this manner." I received this reply: "That they may go to Makka the blessed." What can be expected after this?

The patches of land about the lower ranges of hills, or spurs from the higher ranges, if fit, they also bring under cultivation; and where they cannot bring their bullocks to work the plough, the work is done by hand. In fact, there is scarcely a square yard of tillable land neglected in the whole of Suwát; for all the valley is capable of cultivation, there are no stony places, no sandy tracts, or the like to prevent it.

When the Yúsufzí tribe had effected the conquest of the *samah*, or plain of the Yúsufzís, as it is now termed, lying along the northern bank of the Kábul river, from its junction with the united rivers of Panjkorah and Suwát, until it empties itself into the Indus near Attak,—from the Dilázák tribe, about the year H. 816, (A. D. 1413), they remained quiet for some time. At length Shaykh Malí who was, by all accounts, the chief of the tribe, and another of their great men, Malik Ahmad, having consulted together, determined to effect the conquest of Suwát, then held by a dynasty of kings, who claiming descent from Alexander of Macedon himself, had for many centuries past, ruled over the regions lying between the Kábul river and the mountains of Hindú Kush, as far east as the Indus; together with the whole northern or alpine Panjáb, as far east as the river Jhélum, the Hydaspes of the ancients. The Yúsufzís, accordingly, taking with them their wives and families, invaded Suwát by the Malakand Pass, the scene of a terrible defeat sustained by the troops of the Emperor Akbar, under his favorite, Rájá Bir-bal, at

the hands of the Yúsufzís in after years,* and soon overran the whole of that pleasant valley, which they finally subdued, together with the surrounding districts of Buner, Bájawrr, and Panjkorah.

Shaykh Malí made a regular survey of Suwát and Buner; and portioned out the whole of the lands amongst the sons of Yúsuf and Mandarr,† according to the number of persons in each family; but leaving a portion for distribution amongst three clans who had accompanied them in their exodus from Kábul, a few years before, consisting of Kábulís, Lamghánís, and Nangraháris, but who were not Afgháns. The portion allotted to Afgháns was termed *daftar;* and that given to Mullás, Saiyids, and the foreign confederate clans just referred to, was called *tsíra'í*, by which names these lands are still known. Shaykh Malí first divided Suwát into two nominal parts. To that portion, lying between the right bank, and the mountains towards the north and west, he gave the name of *lánwdah*,‡ in Pushto signifying moist, from enjoying a greater portion of water than the other; for where the river separates into several branches is part of this moist tract, hence the name; and to the land lying between the left bank and the mountains on the south and east, he gave the name of *wuchah* or dry. The bounds of the *lánwdah* half of the valley was fixed, by the Shaykh, from Brrangolaey, the boundary village of Lower Suwát, nearly facing Túkán, on the opposite bank of the river, to Landdaey, the last village to the north, just opposite Pí'á, and extending in length about sixty miles. The *wuchah* portion extended from the village of Túkán in Lower Suwát, to Pí'á, the boundary village of Upper Suwát, a distance of sixty-three miles. The width of both these divisions was from the respective banks of the river to the mountains on either side.

Suwát fell to the portion of the Akozís, a sept of the Yúsufzís,§ who

* The account of this is contained in the Akbar Namah.

† The names of the common ancestors of the Yúsufzí tribe.

‡ The plural of *lánd*, moist, damp, &c.

§ The following is taken from a Persian work written about two hundred and fifty years since, entitled Khulásat-ul-Ansáb.

Sarbaní, son of Æabd-ur-Rashíd, Baṭán or Paṭán, had two sons, Sharkhabún and Karshabún. Karshabún had three sons, Gond, Jamand, and Kásí. Gond had two sons, Ghurah and Shaikah; Shaikah had four sons, Tarkaláni, Gaghyáni, Æumar, and Yúsuf; Æumar had an only son Mandarr by name, who married the daughter of his uncle Yúsuf, and took his name of Yúsuf also. Yúsuf son of Mandarr had five sons; 1st Eliyas, from whom sprung the Eliyászís, who are subdivided into the following *khels* or clans: Panjpáe, Sálárzí, Mánúzi, Guidizí, and Ayesharzí. 2nd Mátí, from whom sprung the Mátízis

are again subdivided into two smaller ones. The *wuchah* was given to the Bá'í-zí division, and the *lánwdah* to the Khwádo-zí division. These two divisions again branch out into several clans or *khels*. Thus from Túták*á*n to Tárr*n*ah, are the Rarrnízís, who also hold a few villages under the low hills south of the mountain range of which mount Malakand forms a portion, such as Tsaná-kott, or, as sometimes called, Sháh-kott, and Dar-gacy. Their chief town is Allah-ddandd, the residence of Sher-dil Khán, before alluded to.

From the town of Tárr*n*ah to the village of Mán-yar, to the north, are the Solízís, who also hold the three large villages of Pala'í, Sher-khána'í, and Zor-mandda'í, mentioned at the commencement of this article, to the south of the Suwát mountains, at the entrance of the Morey Pass, together with the Báz-darah valley, containing the villages of Báz-darah-i-Bálá or higher, and Báz-darah-i-pá'ín, or lower, and the hamlet of Morah. Their chief town is Tárr*n*ah, and Mír Æalam Khán is chief of the Solí-zís.

From Mán-yár, in a northerly direction, to Chhár-bágh, are the Bábú-zís; from thence in the same direction are the Maturrí-zís, who hold some lands among the hills, and a few small villages; and thence to Khonah are the whole of the Khází-khel; and from Khonah to Pí'á, the most northerly village of Upper Suwát, are the Jánakís, or Jának-khel.

Crossing into the *lánwdah*, we find the Khwadozis located as follows. From Brrangolaey to Rámorrah are the Khadak-zís and Abázís, who dwell together; from Rámorrah to Ouch are the Adín-zís; from Ouch to Súe-galí are the Shamú-zís; from Súe-galí to Núngalí are the Nikbí-khel; from thence to Landdaey are the Sebjunís

containing three *khels;* Chagharzí, Nurzí, and Dowlatzí. 3rd Isá, whence sprung the Isázís, who are subdivided into several *khels*. They live in Buner, and are called Buner-wáls. 4th Bádí, whose descendants are few, and do not constitute a peculiar *khel*. 5th Aĸo, whose descendants are the Aĸo-zís. Aĸo had two wives: 1st Rárrní from whom sprung the Rárrnízís. 2nd Gouhárah who bore four sons; 1st Khadak, whence the Khadak-zís, but they are a small community; 2nd Abá from whom sprung the Abá-zís; 3rd Bázid (?), whence the Bá'í-zís, who being a numerous tribe, contain five other *khels*, Ama-khel, Hájí-khel (Khází-khel?) Músa-khel, Babú-zís and Maturrí-zís, but they generally go by the name of Bá'í-zís; 4th Khwádo, whence the Khwádo-zís, who being a numerous sept, comprise seven *khels*, Adínzí, Malí-zí, Shámí-zí, Naikbí-khel, Thaibat, and Chúní-í (?). The two latter are sometimes called Thaibat-Chúnís; but these seven *khels* go by the name of Khwádo-zís. All these Aĸo-zís reside in Suwát and Panjkorah, between the Samah and Káshĸár.

who hold a few small villages; and the remainder to the south are Shamízís.

The number of families or houses of the Akozí sept of the Yúsufzí tribe are thus computed, without generally enumerating the *fakírs*,* and others not Afgháns, of whom there are considerable numbers.

Bá'í-zí Division.

Rárrnízís,	6,000	families.
Solí-zís,	10,000	„
Bábú-zís,	7,000	„
Maturrí-zís,	4,000	„
Khází-khel,	12,000	„
Jának-khel,	6,000	„

Khwádo-zí Division.

Khadak-zís, and Abá-zís,	6,000	families.
Adín-zís,	8,000	„
Shamú-zís,	7,000	„
Nikbí-khel,	12,000	„
Sebjunís,	4,000	„
Shamí-zís,	6,000	„
Grand Total.....	88,000	families,

which at the usual computation of five persons to a family, would give to the Suwát valley the large number of 440,000 inhabitants, not including Hindús, Paránchahs, Suwátís, and others. This I think is not over the mark; for it must also be remembered that the valley is more densely populated than any district I have ever seen, in proportion to its size, either in India or the Panjáb. Indeed some of the districts to the north of Pesháwar are populated to an extent the English have little conception of.

The number of families was chiefly furnished by Mír Ælam Khán of Tárrnah. The Khán Sáhib asked him questions, to which the Mír replied. There was this slight differenee, however, in the mode of computing; for example: The chief said the Rárrní-zís were

* The word fakírs here means tradespeople, such as smiths, shoe-makers, carpenters, barbers, washermen, dyers, mullás or priests, Sayids or deseendants of the Prophet, and shop-keepers whether Hindú or Musalmán, goldsmiths, weavers, Gujars or graziers, servants employed in household duties, and a very few husbandmen; for the Afgháns like the Spartans of old, monopolize the two occupations of arms and agriculture to themselves.

6,000 matchlocks. I asked what he meant thereby; and he replied, that he meant families who could send one adult male capable of bearing arms into the field, which generally is one to a family. It is a very fair mode of computation, and a generally correct one.

Out of the bounds of Lower Suwát are the Doshah-khels to the west of the river, and the Utman-khels to the east; and beyond the bounds of Upper Suwát are the Akhúnd-khels, the descendants of Akhúnd Darwezah, who are Tájiks, that is to say, are not Afgháns. These two khels, however, are, not considered as included in Suwát.

The Doshah-khels are located on the west side of the river, beyond the bounds of the Khwádo-zís, of the Khadak-zí clan. When the Doshah-khels, who formerly dwelt in the hills behind or to the north of the Khadak-zís, descended from their hills, from time to time; they, by paying money to some, practising deception with others, and, according to the Afghán custom, taking by force in other cases, succeeded in acquiring a few villages and some lands, which, had they been wholly in the plain, and not in the hills, I could have visited. The lands they thus acquired they have not built villages upon, but have set them apart for cultivation only. Three of their best villages are, Ttálá, Bágh, and Pingal.

All to the west of Tútakán and Matakaní is out of Suwát and is called the country of the Utman-khel. The village of Hissár, also, is not considered to be in Suwát.

Beyond the bounds of the Bá'í-zís of the Jának-khel, in Upper Suwát, to the north-east, lies Buner, which belongs to other branches of the great tribe of Yúsufzí. On the opposite side of this part of the valley, beyond the mountains, lies the valley of the Ụ'shírí river, belonging to the Malízí branch of the Yúsufzís, known as the tribes of Panjkorah. Beyond the mountains bounding the Kohistán or upper valley of the Suwát river, the country of the Yasín prince lies, and the Gilgittís, who, also, are not Afgháns.

It was a natural consequence in the distribution of the lands of Suwát amongst his people, by Shaykh Malí, that some would have good land whilst others would have inferior; and that sagacious chief foreseeing that disputes would arise in consequence, instituted the peculiar custom of an interchange of lands, after a certain number of years; and to which the name *khasarrní* and *wesh* was given, from the mode of drawing lots amongst this simple race of

people, by means of small straws of different lengths. To this custom all the tribe agreed; and from that time, varying from periods of ten to twenty, and even thirty years, the lands are re-distributed amongst the different *khels* or families, together with the dwellings thereon, by drawing lots for the different portions. This custom is, with a few minor exceptions, in full force at the present time.

Some fifty years since, each *tapah* district or division was drawn lots for; but at present, this is done away with, and the people of each *tapah* draw lots amongst themselves in the following manner. First the people of each village draw lots for their lands and village, which when determined, the people of each street or division of a village draw lots for their portion; and, lastly, the families of each street or division draw lots for their portions. For example: we will suppose the village of Kábul which I have been holding with my clan, falls to you, who have been holding the village of Kandahár. On the re-distribution I get Kandahár and you get Kábul. We afterwards cast lots among our own clans, and I find the house you occupied falls to my share; and the house I occupied falls to yours. On becoming aware of this, we examine the two houses, and if they are about the same size and value, we exchange on equal terms; but if one house be better than the other, one of us must pay something for the difference. If this is not agreed upon, we remove our effects from each, take away the doors, remove the grass and rafters from the roof, and leave only the bare walls standing, otherwise a feud would ensue; for such is the bull-headed pride and obstinacy of the Afghán race.

When Khán Kachú or Kajú, Rárrní-zí, became chief of the Yúsufzís, he decreed that the chief of Suwát should not be required, on a re-distribution of the lands, to vacate the town or village, in which he dwelt, on any occasion. At this time he himself dwelt at Allah-ddandd, so that town was exempted accordingly; but notwithstanding that rule, the lands were, and still are, included in the re-distribution as well as others. This was also confirmed by Hamzah Khán when he succeeded to the chieftainship.

The houses of Suwát, generally, consist of four walls built of mud mixed with sand. On the top of this a few rafters are laid, and dry grass spread over them; and over this a layer of plaster is laid of

the same materials as the walls. They rarely last more than a few years; but this is of little consequence when they have to vacate them about once every three or four. The mosques, and houses of the Hindús, are built of stone in a substantial manner; but those of the Afgháns are all alike. The residence of Mír Ælam Khán of Tárrnah, and that of the Chiefs of Allah-ddandd, were similar to the house I occupied near you, whilst at Pesháwar in 1849, but that had white-wash, and theirs had not.

Some peculiar customs are observed in Suwát, which appear to be very ancient.

In all suits and disputes, contrary to the *Sharæ* or orthodox law of Muhammad, which is observed by all tribes of Afgháns, as well as other Musalmáns, in Suwát the plaintiff, instead of the defendant, is put on his oath, as in English courts of justice.

When a person may have had anything stolen from him, he calls upon the person or persons whom he may suspect, to give him a *saæd** that is to say, as they understand the word, to produce a respectable person who knows him (the suspected party) and get him to swear that he (the defendant) has not stolen the property in question. If the suspected party can produce a *saæd* who swears to the above effect, he is considered innocent; but if a *saæd*, so produced, will not take the required oath in favour of the suspected thief, he is considered guilty, and has to make good the property stolen. These two customs have been handed down from the time of Shaykh Malí.

Another curious custom, and a very good one for such a primitive state of society, is, that when two Kháns or Maliks chance to fall out, or have any dispute, the people expel both parties from the place. The two disputants are then termed *sharrúní* or, the Driven Out, or Expelled, from the Pushto verb *sharral*, to drive away, &c.; and in this state they are compelled to seek shelter in other villages, and are obliged to live on the charity of those who will take them in; for they lose all civil rights on such occasions, and have no claim to wife, or children, dwelling, cattle, horses, or anything whatsoever. Some continue in this helpless state until they can come to an accommodation or reconciliation, which, often, does not take place for years. In Upper Suwát they are even more severe than this;

* Arabic for, felicity. [Compare the compurgation of the Anglosaxons.—Eds.]

for there they expel the families also, and confiscate the property of the disputants altogether. One would imagine such stringent rules would tend to keep the peace, if any thing would; yet these people seem to be always at feud, notwithstanding.

Whenever two Maliks or headmen of a village quarrel, the strongest, or the victorious one, if they come to blows, drives the other out of the village. After some time, the fugitive manages, by bribes and other means, to gain over to his side some of the friends and supporters of the successful party, and all the discontented flock to him. After a time he finds an opportunity, when his own party is strong and the other is weak, to enter the village and drive his rival out. This is enacted over and over again, now one is a fugitive, now another; and this it is that causes such contentions in these parts. The disturbance I previously referred to as having taken place in Lower Suwát, after I left the valley, extended as far up as Chhár-bágh. The whole of the Rárrní-zís girded up their loins to destroy Tárrnah; and from Chhár-bágh to Lower Suwát, all were ready for this purpose, and two battles were fought, one to the north of Tárrnah, and another further south. The Tárrnah people, however, were victorious, having obtained assistance from their clansmen of Buner.

When fighting amongst each other, the Afgháns of these parts never interfere with, or injure the *fakírs* or helots of each other; nor do they injure their women, or children, or their guests, or strangers within their gates; and such might serve as an example to nations laying claim to a high state of civilization.

The people of Suwát are said sometimes to observe the same custom, as practised by the Afrídí tribe of Afgháns, viz., that of selling, or rather bartering their wives, sometimes for money, and sometimes for cattle or other property they may require or desire. But having witnessed the complete system of petticoat Government under which the Afgháns of Suwát, like the English, are content to dwell, I cannot place much faith in their having the courage to do so. The women in this valley enjoy more liberty, and rule the men to a far greater degree than is known amongst other Afgháns, who are so very particular in this respect. I will mention one instance as an example. The Kháns or Chiefs of Tárrnah, who are the highest in rank and power in the valley, permit the females of their

families, in parties of fifteen or twenty at a time, consisting of young girls, young married, middle-aged, and old women, to come down to Mardán in the *Samah*, some thirty or forty miles distant from home, without a single male accompanying them, on pleasure or visiting excursions. They stay at the house of the head man of the village; and return home after the third or fourth day. At the very time I was proceeding into Suwát with the KHÁN SÁHIB, we fell in with one of these pleasure parties of that very family, some twenty in number. They staid the first night at Kasamaey, and the next at Jamál Garraey, at the residence of Muhammad Afzal Khán, Khattak, the chief of that place, and the next day started for the place they were going to remain at for a few days. Although there is no fear of evil consequences arising from these excursions; yet the Afgháns, generally, never, for a moment, allow their females to go out of their sight, for three or four days at a time, without a single male relation to take care of them. It therefore seems almost impossible, that men, who are so much subject to, and so obedient to their wives, would venture to sell them, or even dare to make the attempt.

The Afgháns of Suwát, like others of their countrymen, are very hospitable. When strangers enter a village, and it be the residence of a Khán or Chief, he entertains the whole party; but if there be no great man resident in the place, each stranger of the party is taken by some villager to his house, and is entertained as his guest.

As respects the physical constitution of the people of Suwát, I should say that the men, for Afgháns, are weakly, thin, and apparently feeble, whilst the women on the other hand are strong, stout, and buxom. I know of no aboriginal people of Suwát still existing in the valley under the simple name of Suwátís. The Afgháns of this part are dark in colour, short in stature, or rather of middle size, generally thin, and if stout, they have, usually, large puffy stomachs and buttocks like fat Hindús.

The Gújars are graziers, and are to be found in the Pesháwar valley as well as in Suwát and other hill districts of this part of Afghánistán. They speak Panjábí amongst themselves; and they, probably, are the remains of the aboriginal people of these districts, who were conquered by the Afgháns when they first made their

appearance east of the Khaibar in the fifteenth century of the Christian Era, and not before the time of Alexander of Macedon, as the oracle of the "News of the Churches," and his compeers are foolish enough to attempt to make people believe, contrary to historical proof.

The females of Suwát are not veiled. When they meet a man advancing along a road, they look down modestly and pass on; but the younger women turn their backs generally, and come to a stand still, until the man has passed by. They are, however, very plain, but still look like Afgháns; but the men bear little resemblance to that fine and handsome race in form and feature; for they are dark in complexion, and emaciated in appearance. During our journey this was frequently remarked; for they appeared more like the Gújars of the *Samah* or Plain, below the mountains. If Durkhána'í was at all like the present race of Suwátí maidens, we must suppose Adam Khán to have been crazy to have fallen in love with her. I was told, however, by travellers, who had resided in the valley for some time, that, now and then, some very beautiful countenances may be seen; but I place little faith on what they say; for, when I have inquired what they consider beautiful, I never found their ideas come up to my standard of good looks.

In the morning, the Suwátís breakfast on a dish called *aogrrah* in Pushto, which is made by boiling rice to a dry state, and then mixing buttermilk with it until it assumes the consistence of porridge. It is eaten with a spoon. In the middle of the day, they make their dinner off unleavened bread, and greens sprinkled with a little salt; but use no clarified butter. In the evening they again take *aogrrah* for supper. Clarified or other butter and meat they do not eat, unless a guest or a stranger should drop in, and then not a mouthful scarcely; for they only kill a fowl for six persons! If such be the criterion in the house of a Chief, as we found, nothing but *aogrrah*, dry bread, and greens, without butter, can be expected at the board of the humbler villagers. This may account for their weakly looking appearance.

The lower ranges of hills, on both sides of the valley, are destitute of trees, but are covered with grass; and viewing them from the central parts, one would fancy they were covered with velvet, they appear so beautiful. The next, or highest ranges on either side are

covered with forests, which may be seen from the lower part of the valley every here and there, overtopping the lower hills. These forests chiefly consist of the *jalghozah* or pine, and the *zaitún* or wild olive. The *chinár* or plane flourishes also. The trees are, generally, of large growth, and bear marks of great antiquity. In fact there are planes on the banks of the main river and its tributaries, about the mosques, in the fields, and in the villages, indeed, in all directions, save the lower part of the valley where they are few. The husbandman's home, from morning until night, when working in the fields, is the plane tree, under which, in the cool shade, he rests himself, and where his family bring him his food. The other trees I noticed are the willow, the *bakáyarrn* (melia sempervirens,) and the *palma christi*. The great subject of regret there is, that Suwát has no flowers.*

I have mentioned the names of nearly all the different trees; but in a country where the grave-yards are not allowed to remain undisturbed, it is not likely that there would be much in the shape of thickets, brakes, or weeds or brambles left.

The principal fruits consist of grapes, green, and not very sweet; figs, dark in colour and small in size; apples, of large size and fine flavour and colour; the *túngú*, a fruit in shape like an apple, but in flavour like a pear; the *mamúsa'í*, a species of pear, a winter fruit; the *amlúk* (a species of Diospyros) also a winter fruit, but not produced in any quantity; the *ddanbarah*, another winter fruit; the *jalghozah* or *chalghozah* or pine nut, in immense quantities; the *sanjit*, or *makh-rúrrna'í* (in Pushto signifying, shining-face, honest,) a species of Eleagnis, but growing generally near burying-grounds along with the wild olive; peaches in great quantities; mulberries; and pomegranates.

The people of the more open parts of the valley are not well off for fuel, hence the dry dung of cows is used instead; but where the hills are near, and in their small lateral valleys, fuel is plentiful enough. The pine is chiefly used for this purpose; and pine-slip torches are generally used in place of lamps or candles; but shop-keepers, and students, who have to read at night, burn oil. I was rather surprised

* Khushhál Khán in his poem on Suwát says different; a part of it will be found at the end of this article.

to see a primitive description of lantern in Suwát, something on the plan of English ones, although, of course, not copied from them. It consists of a wooden frame covered with buffalo bladder, or the skin of the *pardah* or membraneous covering of the stomach of animals, stretched over it whilst damp, with a place for oil in the centre. By the light of these one can see to read very well; and during my journey in Suwát I had often to read books by their light.

There are no camels to be found in Suwát; but there are horses, mules, asses, bullocks, oxen, cows, and buffaloes. Oxen, mules, and asses are the beasts of burden. There are also dogs, cats, rats, and mice, as in most countries, pigeons, and fowls, which latter are bred in great numbers. There are no sheep of the *dumbah* or fat-tail species, only the common description of that animal; but there are goats of superior kind. The rivers also contain fish, which, however, do not appear to be used for food.

The feathered game consists of water-fowl in great numbers, partridges, both grey and black, and quail. There is no waste land to shelter game in Lower Suwát, except in the hills on either side, where animals of the chase abound; but in Upper Suwát, and in the Kohistán further north, the case is different.

The only wild animals, in Lower Suwát, are jackals and foxes, which are not numerous.

The chief reptiles and insects are snakes, scorpions, sand-flies, *brorrahs*, *mangurrus*, or bugs, musquitos, and fleas, from which Heaven defend us! they are more numerous than the flies of Peshá-war. The *brorrah* is a species of worm or insect,—a sort of wood-louse—something in the shape of a bug but larger, generally infesting mosques and houses where there are old mats lying about. After biting a person, the bitten place becomes red and inflamed. The *khamanduk* of Kábul and Ḳalát-i-Balúch is a different insect. I slept outside a village, in the plain, on one occasion; but it was all the same: the ground was grassy, and I could not sleep for the fleas.

The principal articles imported into Suwát are, salt, which the Khattaks bring there, from the Salt Range, for sale; and a few articles of British manufacture, consisting of cotton goods generally, such as calicos, twills, and muslins; together with little coarse blue

cotton cloth, the manufacture of Pesháwar; and copper and brass cooking utensils, but only in very small quantities; for the people are so constantly at feud with each other, that they have often to abandon house and property at a moment's warning, and therefore, to prevent the loss of such expensivs articles, they generally content themselves with earthen vessels.

The exports are more considerable; and consist of rice; *roghan* or clarified butter; *úrrd* (phaseolos mungo); wheat; barley, in great quantities to all the districts round about; honey, and wax; searfs woven from the wool or fur called *pashm*, varying in price from one to six rupees each, the manufacture of Upper Suwát, often the work of Kashmírís who have settled permanently in the country; but these articles are not to be compared with those brought from Káshḳár. The *shálaka'í* of Káshḳár is that worn by the Hindús of Kandahár as their peculiar distinguishing mark; but at Pesháwar, Musalmáns and Hindús wear them, without distinction. Bullock and buffalo hides are also exported, but chiefly to Bájawrr. Buffaloes are few in the latter district; and although numerous in Suwát, they are not so much so as to enable the Suwátís to send them for sale to Pesháwar. There is no trade in wool, as sheep are few, as well as goats; and the *pashm* or wool, such as they have, is required for home consumption.

The following lines are taken from a long poem in the Pushto language, which I have referred to previously, by the renowned chief of the Khattaks, Khushhál Khán, who wrote from personal observation. It will be seen that Suwát has not much altered since his day. The translation is literal.

"In the Emperor Sháh Jahán's days, I was in my youth;
And every thing to delight the heart was easy to obtain.
Saráe* from Suwát is distant about thirty coss,
By the time thou descendest as far as the river and hills thereof.
For three things Suwát was in my memory impressed,
In respect to which, all others were as air unto me.
One, indeed, was this, that I had matrimonial matters in hand;
The other was its narcissus gardens; the third its field-sports.
I was in the Emperor's employ; the Yúsufzís were unto him averse;

* Saráe is the chief town of the Khattaks.

Hence it was a matter of difficulty, my going into Suwát.
Malú Khán had arranged the bridal affairs according to my wishes;
And in his house, the mother of Sadr* I was married unto.
But whether 'twas to see its narcissuses or enjoy its sports,
We look back, in old age, the Almighty's favours upon.
The whole of it from beginning to end I brought under my feet:
I became acquainted with Suwát's every nook and corner.
Suwát is intended to give sovereigns gladness and joy;
But now, in the time of the Yúsufzís, 't is a desolate hostel.
On the north it is bounded by the Bilaúristán mountains;†
To the east lies Kashmír: to the west Kábul and Badakhshán.
Towards Hindústán it has black mountains, and frowning Passes;
In the ascent of which, armies will get entangled, and confusions ensue.
Its climate, in summer, is far superior to that of Kábul:
The climate of Kábul is bleak; but that is genial and mild.
Indeed, it resembles Kashmír in air and in verdure;
But alas! Kashmír is extended, and Suwát is confined.
The valley, in length, is just thirty coss, at the utmost:
Its breadth is about one or two, sometimes more or less.
Its river flows in a direction from east to west;
As to its straightness or crookedness, say naught to the scribe.‡
Through every village and house thereof a rivulet runs:
They consume the grain produced, and they export it also.
It has no road thro'; no other occupation; no other profit:
In truth, 'tis a granary wholly detached from the world.
At times the cheapness there is so excessive, 'tis said,
That for two farthings twenty guests can be entertained!
It hath cool water from springs, and from snow also:
In Suwát there is neither *simúm*§ wind, nor is there dust.
Every place throughout Suwát, is befitting a prince;
But without either chief or ruler, 'tis a mere bullock's pen.
Kings have, in it, found both pleasure and delight;
But the present people are not gifted in such like arts.

* The poet's eldest son, also a poet.
† The country of Crystal, from the Persian word بلور so called from containing mines of transparent quartz, or rock-crystal.
‡ Referring to the straight and crooked letters in the Arabic alphabet.
§ Hot wind.

There are large and lofty cupolas, and idol temples also :
Large forts there are, and mansions of times gone by.
It is a garden of fruits, and a parterre of flowers ;
And fit for a king, in the sweet summer time.
In Suwát there are two things more choice than the rest—
These are, rosy-cheeked maidens, and falcons of noble breed.
Wherever, in Suwát, there is a dwelling in repair,
In every room thereof, rosy-faced damsels will be found.
Altho' the whole country is suitable for gardens,
The Yúsufzís have made it like unto a desert wild.
In every house of it there are cascades and fountains ;
There are fine towns ; fine dwellings, and fine markets too.
Such a country—with such a climate—and such streams,
It hath no homes, no gardens, nothing fragrant or fresh.
They gamble away the country yearly, drawing lots :*
Without an invading army they ravage themselves.
The Yúsufzis keep their houses dirty, and untidy too :
Their dwellings are polluted, filthy, full of bad smells.
If there may be *panjars*,† fleas, and mosquitoes in Suwát ;
Who shall give an account of the brorrahs‡ and bugs ?
I got fever twice from the effects of these *brorrahs*.
I was covered with pimples from the rash caused by their bites.
In every house there are as many dogs as human beings ;
And in their court-yards, fowls in hundreds strut about.
Every place inside is blocked up with jars for grain :
In grossness of living, Suwátís are worse than Hindús.
The Bá'í-zís subsist in a manner worthy of them ;
And the Khwádo-zís are chandlers and naught besides.
They could take, every year, two or three hundred falcons,
Were their customs and their ways like that of the Káfirs unto.§
Although other game in Suwát is plentiful enough ;
There is still more of *chikor*‖ in every direction.
There are wild fowl, from one end of the river to the other ;

* Referring to the re-distribution of lands, already described.
† Name of an insect.
‡ A sort of wood-louse whose bite produces a rash.
§ I think there is some mistake of the copyist in these two lines.
‖ The bartavelle, a large description of partridge.

And the rascals' matchlocks are always in uproar on them.
There are mountain goats, wild sheep, and tiny-footed deer;
But the matchlock men, alas! drive them all away.
Since there is so much country included in Suwát.
It is more than the appanage of a single chief.
The boundary of Chitrál is quite close unto Suwát:
Populated and prosperous are its hills and its dales.
The road into Chitrál lieth through its Kohistán:*
A caravan can reach there in the space of five days.
For three or four months this road is good and open;
But, afterwards, hath great dangers from snow and rain.
This road however is not, by travellers, for traffic much used;
But trade is carried on by convoy, through the more level tracts.
There is a road leading to Turkistán by Hindú-koh;
And another, that leads to Chitrál and Badakhshán.
Another road also that leads to Butan and Káshghár;
And one more, that goes to Moráng, up hill and down dale.
All these lie on the extreme bounds of Hindústán;
And there are other routes on the confines of Khurásán.
The Yúsufzís in numbers are beyond all compute;
But they are all asses and oxen nevertheless."

On some future occasion, I propose giving a few extracts from the history of the conquest of Suwát, out of the work written by Shaykh Malí, and the book referred to at page 261.

* The tract through which the river of Suwát flows, already described, at page 253.

ERRATUM.

Page 230, *line* 6 *from bottom.* *For* kolat *read* kotal.

Literary Intelligence, and Correspondence.

Dr. Sprenger writes from Berne to the President, in a letter dated July 28th.

" I am approaching the end of my investigations regarding Muhammad, and after their conclusion I will try whether my eyes, which are still very weak, will permit me to complete my translation of Maqdisy. I have seen Mr. Raverty's four works, which you probably know. They are very creditable. The Dictionary is very full and I have no doubt as complete as it is desirable. The circumstances under which it has been compiled give it all the value of a work done by a native, and we may rely upon it that every word has the signification which he assigns to it. I have examined the Persian and Arabic part with care and find them very well done. The purely Pushto part is naturally still better. His selections are so full that we may say it is the harvest of Afghan literature and not merely gleanings. I had an opportunity to examine the collection of Pushto MSS. which was made by Háfiz Rahmat Khán and is now preserved at Lucknow, and I find that Raverty knows every work of value, though he had not access to that library. The print is clear and correct which naturally enhances the value of the book. The grammar is already known to the Indian public. It is very well calculated for the use of young officers. The translation of mystical verses of the Afghans may be useful for the student of the language, as he finds the original texts in the selections. I hope you will give a very favourable review of our friend's labours in the journal.

Of great use for India may eventually be the pursuits of Professor Brockhaus. After having devoted much attention to the system of transcribing oriental languages in Roman characters, he is proceeding to publish Yusof o Zalykha romanized, and it is to be hoped that the attempt will be followed by other works. Hitherto Missionaries and men like Trevelyan, who were not so much distinguished as scholars as they were as public minded officers, have pleaded for the propriety of romanizing, whilst scholars pronounced themselves rather against it. It is a new era for oriental pursuits if a man of the standing of Professor Brockhaus engages in a system, whose

success in reference to Persian, Hindustani, Turkish, &c., is a mere question of time. Why should you not in your Bibliotheca Indica edit some works like the Hadyqa of Senáy romanized? You can find men in the Madrassa, a system having been laid down, who will transcribe the text.—This year the orientalists will meet on the 24th September at Augsburg."

On the subject of Captain Raverty's work we also add the following extract of a Letter addressed to M. Garçin de Tassy, by M. Nicholas de Khanikoff, Member of the Imperial Academy of St. Petersburg.

Paris, February 13th, 1862.

"When on my last travels in Central Asia, the Academy of St. Petersburg wished me to purchase Afghan Manuscripts for its Asiatic Museum; and I took with me Captain Raverty's Grammar of that language (the Dictionary and Text-book have been published since), for it was in vain to seek elsewhere for details about Pushto literature, at once so interesting and complete as his. I am much pleased to be able to say that his information on this subject was exceedingly useful to me in my search after Afghan works. At the same time, I often consulted, at Hirat, at Sabzawar, etc. etc., the Sirdars (Chiefs) and Moolahs (Priests) as to the correctness of the phrases and examples cited by the Author, in order to prove the rules of his Grammar; and I was especially desirous to take their opinions on the way in which Captain Raverty explains the arrangement and conjugations of the Pushto verbs, so difficult and complicated as they are to unravel; and I am much pleased to repeat, that their opinions were very favourable to the conscientious and intelligent work of Captain Raverty."

The following extracts from letters addressed at different times to the President by a gentleman who has now been for some months residing at Mandaley, give some interesting particulars of the present relations between Burmah and Western China. The brief description too which they contain of such products of the former country as have been brought to him are promising for the advantages soon, it is to be hoped, to be derived from a freer access to the interior.

Mandalay, January 7th, 1862.

About my going up the river, or any one's going up the river, to see what can be done at Bamo towards piercing China, I have done nothing. The attempt moreover to go into Yunan at present, would be suicidal. Though the account in the newspapers of a Burmese embassy being sent back from that province is unfounded, for no such embassy was ever sent, yet the whole province is still disturbed, and the fierce civil war which has so long stopped all commercial transactions is only succeeded by the suspicious calm of a *successful* insurrection on the part of the MUSSALMAN Chinese, or "Panthees," "Panjais," "Panseys," as they are variously named.

These Chinese disciples of Mahomedanism, are now dominant throughout the South-West part at least of the province, and hold the few roads into Burmah. That road which debouches at Bamo runs through the battle-ground, and the people are yet afraid to trust their persons or their property to the chances of safe transit. Some wealthy merchants who had made the attempt, arrived here about a month since stript of every thing but their clothes. The Chinese (here) have a fortnightly dawk from Bamo, and have heard no news yet, which gives them any hope of the traffic being reopened this year.

Some of the "*Panjais*" arrived here a few days ago, but not from Bamo, they came by a route which has been equally abandoned during the civil strife, but which being more immediately in their exclusive power, has been the first to be reopened, by that from "MOMIEN" through "*Theinnee*." The whole distance is a tedious land transit, almost due west,—bullocks, asses, and mules bearing the dried pork, *opium*, walnuts, &c., that form the greater part of their merchandise, copper (and zinc?) too in small quantities is said to form a part of these imports. More of these are expected to come by this same route, but none of the Bamo caravans are hoped for. The Chinese are the reverse of communicative, but what they have told me in conversation, confirms other sources of information to the effect, that the Bamo route is closed either for going or coming, to Chinese as well as foreigners.

On the 1st November, I left Thyetmyo, and have heard not a word from the authorities on the Pegu side of the frontier, since my departure. Such are the facilities of communication! I have been kept in daily expectation of the arrival of dawk boat or Steamer, or

should have been on my way towards Bamo, long ere this. The chief "Inner" minister, a personal friend of the king, and having authority over the Bamo district, has told me that there would be no objection to my going to Bamo. The Maguee Minggyee, however, who is the virtual Prime minister and whose "veto" is sufficient to prevent any step being taken, has heard of the English wanting to send an expedition to Bamo and will say nothing about it, till he is furnished with the particulars of the "personnel," as well as objects of the said expedition. He is also offended by an article in the Rangoon papers, which *preceded* my arrival here.

I have to send you by the next mail an account of a trip to the Shan hills to the Eastward of this; I went up among these mountains to see some tea plantations the king wants to work, in order to know how best to recommend His Majesty to proceed. I had never seen a tea plant in my life before (!) I must tell you; but the idea gave me a very pleasant trip with every advantage of safety and comfort and a week's mountain air and exercise. Although a special guide, the Governor of the district, and about thirty men accompanied me, I had no opportunity of transporting either plants or rocks, and the spoil was therefore trifling. The king insisted on my recommending what course to pursue in order to get tea fit for European markets from these old plantations. I advised that a superintendent be obtained from Calcutta with a few natives to manufacture tea, and another to form fresh plantations. He enquired the cost and salaries, &c., and on my preparing a rough estimate, His Majesty requested me to get the men here, offering to give the money first into my hands if I wished. I have acceded to *their real* wish, however, and advance the money myself leaving a copy of the contract by which the Burmese Government on one side and the workmen on the other, will be bound, in the hands of the "Inner minister."

I write to Grindlay and Co. by this opportunity to endeavour to get these people. There is no reason against the encouragement of Burman tea growing; if they do their utmost they can grow but a few thousand pounds, and this utmost they will not do. If the tea fields do become productive, all the better for us, both *ultimately*, and in the meanwhile, that it is by English aid, the advantage is gained.

His Majesty has asked me about several other industrial enterprises. Among other things he wants to increase and encourage

cotton cultivation by every means; he asked me to get him the estimate of a Hydraulic Press for packing cotton, a Whitney Gin for removing the seed, and the machinery for making *yarn*. I tried to persuade the king to give up the latter project, showing him that it would be a losing one, His Majesty, however, says: "Never mind, let me lose."

He is very anxious to get some mocha coffee seed, cinchona-tree seed, good tea seed and for distribution among the peasantry American cotton seed. He asked me the day before yesterday whether we could buy all the cotton the country would grow! I am preparing a short summary of our cotton transactions that will surprise him even more than what I told him on that occasion. He asked what I thought of the country in comparison with those I had visited. I intimated that I did not wish to speak out on this subject, "the discourse would be long." My not being a master of the Burmese language, especially of the Court dialect, prevented my speaking out the truths that I hope to have yet an opportunity of suggesting to His Majesty. "After you have been here five or six years you will understand all about the country;" "Whenever you think of anything that will be to my advantage, let me know;" said the king. When I spoke of the *undeveloped* wealth in the mountains and the soil of the plains; he agreed, and said, "Ah! the Burmans are very idle." I in turn replied "'tis true! 'tis true!" Usually Camaratta acts as interpreter when I see the king; on the occasion, no one was present but one of the "inner ministers" and myself, His Majesty seemed to be more free even than usual. Yesterday he sent for me, from his impatience to know about what I could tell him of the prospect of his getting machinery to further the cotton exportation. On my entering the inner palace, the sound of the rattan, and its victim surprised me. By and bye, I found the "inner" minister looking on at a general flogging in the yard below, of the door-keepers who had allowed a priest to come into the inner part of the palace, without orders. This minister occupying one of the highest positions, the chief member of the interior council of four, had been scolded but a few days ago by His Majesty, and told that he was a liar, and deserved to have his mouth so struck with a shoe that all his teeth would fall out. Now, seeing the whipper lay it on mildly, he went down the steps, took the rattan himself and flogged the executioner with his own hand to show him how to do his duty!!

The king gave me the other day a pony. The Maguee Minggyee told me that he had presented two to His Majesty, and advised me to ask his colleague whom His Majesty had directed to give me the pony to give me one of them. I went through the royal stables and picked out the best of about fifty. His Majesty I presume is ignorant that the palace stables contain nothing but small seedy ponys of very inferior value. The one I chose is one of the two the Maguee Minggyee had given, the only two in fact that I should not be ashamed to ride. His Majesty has bought a house for me, and seems to count on my residing here.

If our Government pleased to appoint a Consul here, I am sure it might be done. It is a great pity that there is no respectable representative of any English house of business here. I am the only Englishman in the place, and cannot but observe that the failure in the attempt of Rangoon firms to do business here is the fault of themselves or agents. The laws are such, that a contract is not worth the paper it is written on. But the only firm in the country that can do business on any but a huckstering scale is His Majesty. His Majesty is compelled to do his business through a set of Armenians and Moguls who cheat him, and defile his reputation into the bargain. If the king were wise and used his means well, he might be one of the rich monarchs of the East, instead of the poorest. He professes that the English help could be of great service to the kingdom, and hints his fears that our Government would hinder his being supplied with this aid.

His Majesty has undoubtedly great faith in every thing English, of course faith is here quite divorced from charity—and nothing is better than that this faith should be cultivated and fed. The French have been unlucky in the figure they have cut here. The king was intensely disgusted at the set that D'Orgoni brought here, their quarrelling, and exposure of each other's rapacity, even in his presence, abusing each other in the most violent manner, have made an impression on his mind that nothing will remove. I am sorry that a Frenchman here, a *gentleman* not of the D'Orgoni set—is about to bring here a French mint. Every aid, and step by which His Majesty endeavours to civilize his country should be supplied *by us*. There is more reason for this than I can detail to you here. For the good of this people, for the advantage of our own commerce, and

for the advancement of civilization and Christianity, we should assist to raise this country, while *it has a ruler willing, nay anxious* to avail himself of every aid he can obtain to that end. The present king would rather get cotton grown, iron smelted, pottery made, and produce of all kinds exported, than get fresh muskets or cannon when he knows he can't afford to load them. The muskets he has, he lets remain rusty and uncleaned. In the scientific or natural history way I have been able to do nothing. The Maguee Minggyee promised to lend me every assistance, *i. e.*, leave to collect in getting Burman specimens, but wished me to write to Calcutta and get some foreign trees and plants for the king's garden; His Majesty too asked me to get him some shrubs and trees or seeds of them, to plant in his "botanical garden," where he purposes to collect all the plants of the world!! Some flower-scented flower seeds and flowering shrub seeds he much wishes. The Shan hills, I think might prove favorable to the quinine tree. I discovered the real *cinnamon* tree in abundance there, with bark of apparently prime quality. If any cinchona or quinine tree seeds are procurable in Calcutta may I ask the favour of a few being sent to me by post?

Mandaley, February 12th, 1862.

Your kind note of December 14th I received four days ago.

In my last I said I hoped to be able to send you the account of my trip to the Shan hills, and of my being about to start immediately for Bamo. I have been so busy lately that I have not had time to write out my notes of this trip. My trip to Bamo is very indefinitely postponed. The Court of the great king, Lord of countless umbrellas, is a little disturbed with doubts of my being really a harmless "teacher officer," or a disguised powder barrel. The Golden Face is in fact dim towards me. I have not seen it for nearly a fortnight, and of course, am devoured with grief! It is very likely, however, the sun will shine again soon, especially if Colonel Phayre sends a pleasant message to them, or I get something to present to His Majesty's garden by the Steamer.

Further than Bamo, I would not think of attempting and am quite certain I should get no one to accompany me.

These Mussalman Chinese are inclined to be aggressive towards Burmah. I have private information of a message they sent to this Court, requesting to be allowed to come to trade by the Bamo road. Their request was accompanied with a threat. Their adopted faith has very likely infused into them a fighting spirit. They are masters of western Yunan, it is certain; and hold all the doors of communication between China and Burmah.

I am delighted to find Colonel Sarel's account of his trip up the Yang-Tse Kiang in the No. of the Society's Journal just received. Yunan then *imports cotton* from both sides, and exports minerals. Its trade with Burmah if re-opened will be in the hands of the Panjais or Mussalman Chinese, not as of old in the hands of the orthodox Chinese. As far as I know, the Government here sent a pacifying reply to the Panjais from Yunan, and ordered the official at Bamo to allow them to come, but without arms, and to watch with vigilance their numbers, and doings.

I dream of the removal of the capital (query whether as a capital) back to Ava, of a beautiful pleasant suburb at Sagain with a steam ferry between: Ava to be the depôt of the China trade *viâ Theinnee;* having ready communication, with Tonghoo; and a half way station or depôt, for the *Bamo China trade* which used to bring into the king's coffers five lakhs a year! Now of course not a rupee is collected at Bamo from the China trade.

You cannot imagine how difficult it is, to get information and yet avoid exciting suspicion here. I hope to get, however, correct and full particulars of the present and past state of the Bamo and China route; if I fail in getting up there myself.

You are no doubt well aware of what is going on in Cochin China, and read the signs of General Bonard's ("the French Mouravieff,") doings. The Cambodia, as far as I can learn here, and I trust my information, is navigable for large boats up to *Kiang Tsen*, latitude 20° 50′ from thence to just below *Kiang Hung Gyee* in latitude 22°, it is obstructed by rocks and rapids, over which small boats only *can be dragged.* Above this again, the river is open and clear.

Kiang Hunggyee is in Burman territory. Kiang Tsen, as far as I have ascertained, is Siamese. That is, the Shan inhabitants are tributary to Ava and Bankok respectively. So you see how near our

Gallic friends are. I think it highly important that the Shan States be made interested in the British policy before they are permitted to be played on by French influence.

In the midst of this excitement here, I await with confidence the opening up of the country. The Woongyee has indeed appeared to be convinced that my going over the country can do nothing but good, and has even hinted a day or two since, that he will do his best to get the sanction of the king to my examining whatever mountains I wish to visit, and looking at what I want with all the assistance they can give me. This Iron has had an effect on them. The king has been told of it, more than once, and discussions have taken place how to best reap the benefit of what I have shown to them. I shall hint that they might reward me by giving me the opportunity to throw open to them other sources of wealth. The Woongyee has hinted that I might perhaps go over mountains, &c., with this view.

I give you a short account of my visit to the Iron Stone mountain. On Sunday evening, 29th June, I sent to the Prince, to say that I thought rain would fall heavily after a few days, and would like to go to the Iron mountain "to-morrow" or next day. The reply was an elephant at my disposal at 9 o'clock that evening and ten musketeers would be ready to accompany me in the morning, when before starting His royal Highness wished to see me.

On Monday morning then, the Prince ordered the men in command of the militia to take care no dacoits or thieves came near me, and requested me to take care of fever and particularly not to stay many nights at the dangerous place.

Turning the Mandaley ("Mandivè" in Yule's Map) hill on the west and north sides, we skirted the immense artificial reservoir of the "Mandaugan," cutting through the south-east part in a north easterly course, till we neared the little villages that lie between it and the foot of the precipitate Shan mountains, like oases in a green desert, for the plain was all green paddy, and the village sites were clumps of bamboo, palm, mangoe and tamarind trees with little gardens and patches of Plantain trees. After about (5) miles, we came upon ground evidently formerly cultivated for paddy, but now left to the white dhatura, the euphorbias, and scanty herbage, for want of rain. My Mahout, a native of this district, said for the last

five years the want of rain had prevented cultivation. "Why don't you grow foreign cotton?" Where can we get the seed? The Burman cotton won't grow here, and is bad. The "Thimbau" (literally *ship*) cotton would answer very well, if we could get it. "Well, supposing now I were to give you and all the people here the seed, would you cultivate it, and sell me the produce by contract at a certain rate agreed on?" "Oh yes, and gladly." "We are all in great distress now, and do not know what to do." "What taxes have you to pay." "None, we only give a *quarter* of the produce for the land." "And your service, what wage do you get for that?" I knew before,—"What wage, what do you mean?" I am an 'amoodan.' An amoodan is an hereditary servant of the throne. All the soldiers are amoodans, there are amoodans of all kinds. Soldier amoodan, 40,000, boat amoodan 10,000 (?) mahout amoodan 3,000 (?) horse amoodan 3,000. (The General commanding the Cavalry, told me 25,000!) artillery amoodan 1,000, blacksmith amoodan, tailor amoodan 300, &c., amoodan of all occupations in fact, who are the hereditary slaves of the crown. All amoodan children are amoodans, and a freeman marrying an amoodan's daughter enlists himself thereby. There are amoodans who do nothing but cultivate the royal land, unless called to some special work; and on special occasions all the population become amoodan, *i. e.* render free labour and service to the king's order, for instance the great canal which as yet has failed.

They live then on the three quarters of the produce of the land lent them by His Majesty. This amoodan system has opened up several questions to me that will probably be of practical interest to us at some future day.

Well, continuing north-east by north we passed over a large expanse of good soil, with but here and there a little cotton (Burman) a little Indian corn, a little patch of unhealthy paddy. It seemed to me good, arable land, rich but a little too dry for paddy. The Mahout's accounts confirmed this.

About 1 o'clock P. M. I noticed some bluish limestone cropping up with a surface altered into chalkiness. This was in situ, of a fine quality. Would pay immensely if burnt, for lime is of enormous price at the capital. No more stone, till we came to "Bouk," a village at the foot of a high part of the range of mountains, about 3

o'clock. The rest of the afternoon I spent in shooting myself a dinner of *one quail*, and two plover for my guide, an Armenian sent by the Prince. The ground gravelly, formed of debris from the mountain supporting a shrubbery of Acacias, Zizyphus, Euphorbias, Cutch trees, &c. &c., and a pretty good herbage; besides the gravelly debris, there being a good alluvial of rich red soil.

The evening spent in getting information from my host the headman of the village and district.

The morrow we started due east to the instep of the hills, and soon came upon a kind of schist, ringing at the hammer, dipping as far as I could see about sixty-five to the east and with its striæ shown by the weather-worn surface and by fracture running north and south, huge masses were scattered over the surfaces, but much was evidently in situ. Among it I came upon a mass of conglomerate, which seemed to curve up from between the schist, and which consisted of pebbles of quartz and large lumps, some a foot in diameter, others an inch or less, of the magnetic oxide of iron, cemented together by siliceous (?) matter into a hard mass. This I had plied with some crowbars, it seemed to go deep and extended along to the foot of another little hill. Going on, I found lots of the oxide imbedded in the soil lying on it, and sometimes firmly bound by the schistose rock. I ascended a small hill, formed as of huge masses of the schist, piled one on other, and after asking some more questions, determined, much to the discomfiture of the military guard, to go on forthwith to Seebeing, a village the other side of the immense mountain before us, and which journey I had intended to make the next day. Mounting my pony, followed by the village headman also mounted, I set out, then at about 9 o'clock. Our path lay first north-east and east, winding up between the hills, till we had evidently pierced the range, then turning *south*, we had the high ridge on our right and west, another high ridge on our left. Our path lying along a valley stretching between the two ridges. The summits were serrated, clothed and fringed with trees, except where evident landslips had left great bare perpendicular patches of red earthy-looking rock. The stones, and bared rock of the same schistose character, apparently a schistose limestone. Generally black by exposure and of most irregular weathering, sometimes, however, the rock, though evidently of the same nature, was whiter internally and weathered a clean cream colour with a smooth surface.

The valley narrowing, we slowly ascended still, till at 3 P. M. we arrived at the village of "*Seebeing*," where the inmates of six houses live by making charcoal on the sides of the hills on either side of them, and so close that it looked as if one could throw a stone to either. I hurried on to the spot where the village people said the "iron stone" was to be found.

After a mile or so, we ascended some of the toes as it were of the mountain on our right or west side, and at one spot, I could see far away, the valley stretching to the south and widening into low land. Getting close to the main ridge, they conducted me to a hole, about six feet square and ten feet deep. "Who made this?" "We dug it, because when this 'iron stone' was shown to the king, His Majesty said, there must be *silver* ore, beneath where this was found, and ordered us to dig. We did so, but could find no silver ore." I went down the hole by a bamboo, and found the same rock that I had been going over all day, but a more slaty-like structure and of a more crystalline grain, with none of the veins of quartz that made some of the rocks bear the name of a silicious schistose. The dip was east 65° and the cleavage so to say north and south. Besides this was on the south and west side of the whole huge blocks of iron oxide, (magnetic) and as deep as could be examined, the same iron ore with little pebbles of quartz, and clayey matter extended.

Coming up I examined around, to the east, west and south I could see nothing but the crystalline, cleavable, rock, rising in great masses, and tumbled pell-mell down the mountain sides. To the north, however, I tracked up a line of iron ore cropping out from among the common rock, in sometimes huge blocks of several tons' weight. One piece I saw, like a great square casting, with little veins of quartz running through it, and a flat table surface six feet by ten feet, while its thickness was not less than five feet. Other enormous blocks seemed only barely uncovered, and I must have seen and handled hundreds of tons within the few yards I could examine. The little hill on the side of which these blocks were cropping out, was crowned by several knife-like peaks of the common crystalline rock, looking like awful sentinels, and of a drab-grey colour, not black.

Turning back to the village, I found my escort, guide, he had just arrived, my boy being at Bouk with all provision, clothing, &c. &c.

What was to be done to appease the stomach that could not digest ironstone, or slaty limestone? I bought, after some trouble, for the poor people had no provision to spare, some rice for the escort who had also left all at Bouk, and permission to shoot a fowl, I shot the fattest hen I could see, and my syce having boiled it, finger and thumb did duty for carvers, and while discussing the "Sigbing well," a probable exhalation of carbonic acid gas, in the neighbourhood, and the morrow's route, I fell asleep.

On waking the next morning I got all to set out for Bouk at once, and again with my companion of yesterday, the Bouk headman, started north along the valley. After following the same road for some six miles, we struck off against the ridge on our left as it were, but managed somehow to come into a glen and then up and down, through a pass across the apparently single but now clearly compound ridge of mountains, and finally descending on the western side, came into the road of yesterday again, and after getting a view of Mandaley in the distance, reached the plain and galloped into Bouk.

Here some blind people who had heard of my relieving some people at the capital came to get sight. They were incurable, but showed me that my healing fame was spreading.

Returning the same afternoon we went first south-west for a little, then westerly to gain the north-west corner of the great Nandangan reservoir. In the plain about four miles from the mountain foot spurs, we came upon a hill of mainly the same crystalline limestone with the same dip and strike that I had seen near *Seebeing*, but with also abundance of quartz and felspar. (?)

A quiet ride along the flat plain, through a few villages, and about 7 P. M., the tired elephant landed me at my door.

These hills evidently consist of transition rocks of Primitive Limestone, gneiss, silicious schist, slaty and crystalline limestone,—mica is more or less abundant everywhere. The small hills that I have had an opportunity of examining between the Irrawaddi and the Shan mountains, and south of the Sagain limestone, are *gneiss*, *granite* as at Kangee of a red and grey mottle, with no tendency to stratification, crystalline and slaty limestone, and silicious schist, and pure quartz as at Kyatping about thirty miles to the north-east of this.

While at Bouk, I obtained information of some iron stone similar to that at Seebeing being found on the east side of the same mountain whose west foot shows the oxide at Seebeing. From Seebeing to that spot is four miles, from it to the foot of the mountains two miles, from the foot of the mountain, carts can come to a ferry on the Ongbringlè, and all difficulty ceases. From Seebeing itself the villagers can come to Mandaley and return half way the same day, by a rugged pathway through a pass in the mountains. If the ore be, as I see no reason to doubt, in immense quantity, the reduction of it on the spot where wood and charcoal are to hand *ad libitum*, or the transit of the ore to the river, would be both feasible and immensely profitable. I assayed the ore and obtained 68 per cent. of pure iron. I smelted some with limestone, and made it into steel, by the *Wootz* process.

It was pronounced by the French mechanic in charge of the Prince's foundry equal to the best steel purchased from Calcutta, as English steel, and made into chisel, &c., that cut the said English steel. The mechanic told the Prince, that if he could get this steel, he should require no more foreign steel for the purposes of the workshop. The price of the "English steel" mentioned is seventy-six rupees a hundred viss.

Mandaley, May 2nd, 1862.

If you know from other accounts the real state of Yunan, you will not be surprised that I am still in Mandaley. Nothing could be done, beyond getting one's throat cut in vain, in the Chinese territories bordering on Burmah. The rebellion is over, the suspicious calm I spoke of in my last to you, has broken up into general lawlessness, rapine, and anarchy. Village plunders village, every man's hand is against his neighbours. Famine and distress have swelled the numbers of robbers and pillagers. If a Chinaman comes through the passes it is in flying from his enemies without goods or property and often leaving his children or his wife in the hands of the successful insurrectionists.

The Kakoos or Kakhyens have been drawn into the strife, or rather the universal scrimmage. They are plundered and forced to join their plunderers in the next expedition of rapine.

Again I think it would have been useless to attempt the journey

because the present state of things here must change. The country cannot exist much longer under the present policy. That policy is so much disapproved of by some of the chief men of the country that it must change.

P. S. The most reliable accounts I can get about the cotton produce, are that the average produce *was five million* viss a year. This dropped on the commencement of the Yunan troubles six years ago, and consequent ceasing of the cotton exportation to China, and cultivators gave up cultivating cotton, because there was no market for it. Within the last two years only has it been cultivated with a view to exportation down the river. The whole produce last year was estimated positively as the most correct amount by the Yo Atween Woon (I can get no more reliable authority) at one million and a half.

Got another ore to-day from a hill twelve miles distant sent me by the prince, a magnetic oxide in quartz, said to be *plentiful*.

Mandaley, June 11th, 1862.

I have learnt within the last few days something of the reason how it was I could not get up the river. The Bamo At. Woon who showed himself to *me* most willing to assist me, told the king about my wishes to go to Bamo, and about the proposed expedition, mentioning the desire of the English to open up the commerce with China by that route and to have Merchants' Agents at Bamo. His Majesty did not see any reason against these measures, but the Bamo At. Woon himself did, and advised the king that I should not go, and that if English Merchants get up there, complications and difficulties would arise, that would become serious. Another Atween Woon, the frequent listener to little discourses of mine, was of opinion that the revenue and advantages to be derived from English mercantile transactions through Bamo would be a great good, and that if the English wished to try, they should be encouraged.

This Atween Woon it was who more recently told me he would manage to get me to go to the gold districts of Mogoung. He was sincere; but I suspect, from his telling me a few days ago *what is really the fact*, that in this season, it would be impossible for me to reach the spots from the overflowed state of the country, that higher authority than his does not see that it would be prudent to allow me to go.

As to the China side of Bamo, my former letters to you will have shown you that nothing is to be expected from there either commercially, or as welcome for a scientific expedition for a long time to come. Yunan is in short yet in anarchy.

The Chinese, themselves in constant communication with Bamo, inform me that no commerce of any kind is to be hoped for a long time. The country is still in the hands of the Moslem Chinese who, like their brethren all over the world, have imbibed with their faith a love of the sword and its work. They are but a handful among their countrymen but play sad havoc with its tranquillity.

I am just at present in great popularity here. The great people profess for me the most cordial feelings and the heir-apparent, the renowned "War Prince" after the many times he has expressed himself so graciously towards me, sent for me the other day to spend the *day* in conversation with him. His royal Highness reiterated his request for me to teach one of his Secretaries chemistry, saying the king had promised him the post of Atween Woon (Minister of the Lower Council of four) as soon as he had acquired the science. We got on the subject of stones and a little museum grew up before me, containing several mineral ores, that the Prince said he had obtained by sending his men over the country to seek for them.

These ores he sent to me for analysis and now while I write several of his people are in my garden working a forge and bellows, reducing some iron ore under my directions in order to my analysing it. It is a rich magnetic iron ore, similar to that which produces the best Swedish iron and *steel*. It was brought in about a year ago, but its virtues have hitherto been disbelieved in, and it has never been reduced. There are immense quantities of it two days from this.

Another I have found to be almost pure BISMUTH. The ore having a speeific gravity of 8.1

A third was an iron pyrites also abundant, but of no use except for sulphur and sulphuric acid, both of which, the prince assured me, they make from it.

The bismuth ore I do not yet know from where it comes or whether it is in plenty: I am afraid not. If it is, this ore, the steel producing magnetic iron, and cinnamon, and tea that will be produced from Burmah, will amply reward me for my series of annoyances and vexations suffered here. There ought to be found some *tin* ore

somewhere in this range; gold, I look on as only waiting for an opportunity to be worked up into a new little "El dorado." The rapacity of the local and distant officials took so much of the profit away from the native diggers that it has long ceased to become lucrative, but the geological formation of the rocks, the abundance of gneiss, quartz and mica hills, the almost universal presence of gold in the river sands proclaim that new "diggings" will be opened somewhere in this range of mountains, which after all are but the parts of the chain that in the Ural and Australia are so rich in the yellow god.

When I was before His Majesty a day or two ago, they discussed the advisability of making acquaintance of some branch of knowledge a necessary part of fitness for office. The Prince, said I had promised to teach chemistry, to the Secretary to whom His Majesty had promised the Atween Woonship, and they came to the conclusion that every high official should learn some branch of science!

We have just finished the reduction of the magnetic ore. Got fifty grains of bright pure metal from seventy-five of the ore, and I have no doubt that this is not the most to be obtained.

Your informant makes a mistake about the gin for cleaning cotton. Nothing of the kind has been received here, cotton is cleaned with the little hand-roller and nothing else. The French workman made a whitney gin but it did not answer, neither have they Presses. In the event of a treaty being got, these will be obtained in plenty, however, by the merchants who will then come to this splendid field.

Splendid it is in every way, vegetable, animal and mineral products in unbounded quantity. I shall regret leaving it before seeing it opened to the English shovel and spade.

The following is from Capt. L. Pelly, since last year, on the east coast of Africa.

Zanzibar, 28*th July*, 1862.

I have just received news from Captain Speke; he was writing in September last year, in 3° 28′ South, about forty days S. W. of the Victoria Lake, and about eight days W. N. W. of the Tanjanika Lake; at a place called Babweb. He has been sick—had met with many delays owing to the disturbed state of the "Umainesi" territory. Grant had been looted. I am securing a caravan of fifty men with goods after them.

Baron Deekan leaves this for Momlass in a few days. He will return to the Jagga territory, thence turn the Kilimagari snow-peak, and push on North for Kenia; coming back again to the coast of the Masai haunts.

Some months ago I proposed a tour to this Kenia. My idea was and is, that it is the highest peak of all; and the centre of a group whose eastern streams run down to the Formosa Bay south of Sanoo, under the names of the Ozi, the Dana (probably the main stream) the Pamumla, &c. I cannot help also conjecturing that streams run N. W. from Kenia. Government properly considered that I should not leave my post at Zanzibar for any length of time; hence I could not undertake the trip in person. But I feel pretty sure that if prosecuted across Kenia and to the north point of the Victoria Lake, it would be one of the most interesting tours possible.

You say some gentlemen wish to come to Zambezi on a shooting expedition. Allow me to mention that some time ago Baron Deekan entered at Wanga, south of Wasseenpar: of latitude north point of Pemla Islands, and passed ten days in land W. and E. South to the Lake Zijse, through which passes the river Paugani debouching nearly opposite to Zanzibar. The Baron's route was good, practicable for donkeys, tribes not hostile, passed after leaving the coast, the Wadigo country, keeping the Umba river always on the right, in four days reach Baramu belonging to the Usumbarah king. Pass villages of Tassini, Tesa, Mikueni, Tesamkuba, of the Wadigos, then three days through the wilderness (game, antelopes, gazelles, pig, rhinoceros, fowl, zebras, giraffes, buffaloes, &c.,) then from Baramu to Pare, two days' sport the same, then from Pare over Kiswani in two days to the Lake Zijse, the lake is some thirty miles long and two to three broad, its western point only three hours from Daffeta where you can buy supplies. This sporting-ground is magnificent: elephants, hippopotamus, rhinoceros, lion and all game down to the smallest.

There is only one day's march during which no water is procurable. A party leaving Bombay during the north-east Monsoon, by Buggalow could reach Zanzibar in eighteen or twenty days; and be on their shooting ground in a month from date of quitting India.

Mr. Cooke just now left me to put up some specimens for you.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR MAY, 1862.

The Monthly General Meeting of the Asiatic Society was held on the 7th instant.

A. Grote, Esq., President, in the chair.

The proceedings of the last meeting were read and confirmed.

Presentations were received:

1. From Captain F. W. Stubbs, a rare and undescribed coin of a King or Satrap named Sophytes.

2. From Babu Gourdass Bysack, the coin of Altumsh, exhibited at the last meeting.

3. From Babu Brojojibun Bose, an inscribed copper-plate found in his Zemindaree, Lot 55, Sunderbuns.

4. From J. G. Pughe, Esq., Monghyr, a black stone image of Buddha, with an inscription on the back containing the usual Buddhist creed.

5. From Dr. Hayes of Singhbhoom, cranium of a Lurka Cole.

6. From Mr. Cowell, a copy of the eighth Sarga of Kumára Sambhava, edited by Pundit Premchandra Tarkabágis'a, with his commentary.

7. From Dr. Tholozan, Principal Physician to His Majesty the Shah of Persia, through E. B. Eastwick, Esq., Secretary of Legation, Tehran, a copy of Persian translation of a treatise on Auscultation, Percussion and Palpation, published by him.

8. From D. Framjee, Esq., a copy of his work on the origin and authenticity of the Arian family of languages.

Mr. E. C. Bayley, read the following, containing a notice of some sculptures and inscriptions from Muttra, which the Lieuten-

ant-Governor of the N. W. Provinces has placed at the disposal of the Society :—

At the close of 1860, Mr. Best, the then Collector of Muttra, in levelling a site for the new cutcherry at that station, cleared away a portion of a large earthen mound. It soon appeared that this mound covered the ruins of a large building which had, at a very early period, been levelled, and above which had been built a Musjid of some antiquity which in its turn had been blown up for Military reasons during the mutiny. The mound, which is pretty extensive, is situated at the entrance of the station, from the main road leading from the city of Muttra to Agra.

Mr. Best had not the means at his command to complete the investigation of the ruins. Nor has any attempt been made to ascertain the ground plan of the original building, but the mound was trenched throughout, and a number of statues, cornices, bas-relievos and pillars have been discovered.

These are all more or less mutilated, and appear to be of varying antiquity. It is probable, therefore, that the building passed through stages of decay, repair and additions before its final destruction. One piece of stone indeed, which originally appears to have formed part of a sculptured drain pipe, has evidently been subsequently made to do duty as part of a stone-ladder, and the ruthless hands which fitted it for the latter purpose, have unfortunately hacked away a great portion of a very interesting inscription which it originally bore.

It is indeed on account of the numerous inscriptions which these sculptures bear that they are chiefly valuable. Their execution is not of a very high order, and the coarse material of which they are composed, the common red sand-stone of the neighbouring quarries, is not favourable to any great degree of perfection in plastic art. They are all, however, of a Buddhist character, and the inscriptions add their testimony to this effect.

Colonel Cunningham, who visited Muttra shortly after their discovery, in company with the Lieutenant-Governor, immediately recognised the value of the discovery, and at his recommendation measures were taken to preserve what was discovered. He copied the inscriptions, and on a subsequent visit to the place, I also did so somewhat more leisurely. Our copies for the most part agree pretty

accurately, but the inscriptions themselves will, I trust, soon be published in our Journal from the originals which the Lieutenant-Governor has kindly placed at the disposal of the Society, and which the East India Railway Company have liberally agreed to convey to Calcutta.

I do not therefore propose now to describe them at length, and merely say that an inscription on one of the pillars declares the building to have been a "Vihar of the great king of kings Huvishka," whose name occurs in the well known Bactro-Pali inscription found at "Wardak" in Affghanistan. Colonel Cunningham was the first to point out that there can be little danger in identifying this Huvishka with the Hushka of the Scythian kings mentioned in the Raja Tarangini, in the same manner as the "Kanishka" of the same authority and of the early traditions handed down to us from other sources, has been identified with the Kanishka of at least one Bactro-Pali inscription, that of Manikyala. The two kings are too almost beyond doubt the Kanerki and Ooerki of the Indo-Scythian coins.

Several of the Muttra inscriptions, including that which mentions Huvishka, are dated in ciphers, and it is curious that apparently the same class of ciphers is used as in the Bactro-Pali inscriptions which read from right to left; throughout the inscriptions from Muttra are all in the Indo-Pali characters which read from left to right.

Unfortunately we are as yet unable either to assign any value to these ciphers, or to be sure of the era to which the dates refer. The present discoveries, however, afford data which it is to be hoped may render the solution of the enigma more easy.

Two of the inscriptions record the titles, and one also the date of another king whose name, however, is unfortunately imperfect, and which we can at present only say began with the word "Vasu," it may have been Vasu Deva, Vasu Mitra, or some other similar compound.

Some names of places are also mentioned as Udiyana, possibly the modern Hurriana.

These results, however, and I hope others, will be given at length in the Journal on the arrival of the inscriptions themselves, which I trust may be at no distant date.

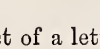
I can only say that I hope some remaining portion of the mound

may, at some future date, be completely explored as well as the many similar mounds existing at Muttra, all of which probably cover, and some of which are known to cover, similar remains.

From the accounts of Fahian and Houan Tsang who describe twenty monasteries (some as old as Asoka) as standing in their time as well as other buildings, some Buddhist, some Hindu, there can be no doubt of a rich Antiquarian harvest from any properly conducted excavations.

The following extract of a letter from Colonel Cunningham to Mr. Bayley was also read:—

"I was glad to receive your letter of the 17th with all its information about coins and inscriptions.

I duly received Rajendra's translation of the Wardak inscription. I think that he has given the general scope of the inscription, but he has certainly erred in many of the details, as several of his readings are quite inadmissible. What does he mean by saying that I read the figure as 3? I read  as 331; and now for the proof that this is the correct reading and that the date is in the Seleucidan era—I read the opening of the Wardak inscription as "*San* 331 *Attamisiyasa divasa vrehi* 14"—"In the year 331, on the fourteenth day of the increase of Artemisias." What do you think of that reading? Artemisias was the seventh of the Macedonian months, and if the Seleucidan era was in use, we ought to find the names of the Macedonian months also. Now turn to Ariana Antiqua, to the ink inscription from No. 13 Tope at Hidda, which I read

San *Mâse Apilaësa vrehi dasami.*

In the year on the 10th of the increase of the month Apellœus." A careful examination of the original might perhaps show Apileyasa as the true reading. The word *s'arira* (relic) occurs shortly after the date in this inscription.

Inscription No. 3, Plate IX. of Thomas has the same year but I read the remainder of the date doubtfully as

"*Mâsa Attamisiyasa Vrehi* 1."

I have an impression of this inscription which differs in some letters from Thomas's copy. Another inscription of which I possess a copy, given to me by Captain Robinson of the Engineers, opens with a line which I read without much hesitation as follows.

San 5 *Mâsa Tsattikasa divasa Vrehi* 3.

In the year 5 on the third day of the increase of the month Xanthikos.

In all these inscriptions it is observable that the word *mâsa* precedes the name of the month, whereas in my two Yusufzai inscriptions, in which the Hindu months are used, the word *mâsa* follows the name of the month. This may be a useful hint for the reading of other dates.

In Court's Manikyála inscription the name and day of the month are given at the end, I read them as

Káttikasa mâsa divasa 3.

"On the 3rd day of the month of *Kárttika*."

The date of the Manikyála, Hidda, and Thomas No. 3, Plate 9, inscriptions, is the same, namely ×××| which I incline to read as 144 from right to left, and I would refer the erection of the three topes to the period of Kanishka's conversion to Buddhism, say approximately 25 B. C. Then 25 plus 144 would give 169 B. C. as the initial year of the era, which may probably refer to the Scythian occupation of Bactriana and Sogdiana, which we know must have taken place about 170 or 160 B. C. during the time of Eukratides and Heliokles. The coins of the latter prince were copied by the Scythians, as well as those of Euthydemus.

Vrehi, I take to be equivalent to *Vriddhi* "increase." The reading of *Vrehi* I believe to be quite correct, but we cannot be *certain* of it until we find an inscription dated during the "decrease" of the month. Quintus Curtius, whose information was derived from the records of Alexander's companions, states that the Indians reckoned time by half-months, according to the increase or decrease of the moon. There is every probability, therefore, that I am right in my reading of the Macedonian months.

I have not time to go through the Wardak inscription just now, but I may note that I read the name of the hill mentioned in the first line, as *Khâsatamri Kotala*. And small hills in the Kabul valley are called Kotal as *Haft Kotal*, the seven hills, and *Khâsa* is the name of the Takt-i-Sulimân or *Khâsa-ghar*.

Regarding my explorations during the past season, I can only give you a rapid account. I visited Gaya, Bodh Gaya, Kurkihar,

Giryek, Rajgir, Bargaon (or Kundilpur), Bihár, Ghosrâwâ, Titráwá, Púnáwá—the Barábar and Nágárjuni caves and Dharáwat, all in south Bihár. To the north of the Ganges I visited Besárh, (the ancient Vaisáli) Bakhra, Kesariya, Laoriya, Navandgarh, Parharaona, Kasiya, Khukhundo, Kahaon, Hathiyada, Bhitari, and Sárnáth Benares. I closed work at Benares on the 1st of April.

At Gaya I got numerous inscriptions including one dated in the era of Buddha's Nirván. At Giryek I opened Jarasandha's tower and a small ruin close to it from which I obtained 83 lac seals with impressions of topes and the Buddhist formula, *Ye Dhármma*, &c.

At *Rajgir* (the ancient Rajagriha) I opened the central tope without any result, excepting the discovery of a narrow passage showing that the monks had easy access to the relics, and must have removed them when they were ejected from India. The cave called Son Bhándár in the Baibhár hill, is beyond all doubt the celebrated cave in front of which was held the first Buddhist synod. In two inscriptions it is called *Subha Guha*, the auspicious cave.

Bargaon or Kundilpur is the ancient *Nálanda*. I found two inscriptions giving the name of Nálanda. The ruined mounds are enormous in size, and would perhaps repay excavation, one of them ought certainly to be completely excavated, but the work would not occupy less than six months.

At Bihar I copied the two Gupta inscriptions on the stone pillar. The lower one opens word for word the same as that on the Bhitari pillar.

At the Barábar caves I copied all the inscriptions. The oldest are of Rajah Dasarath dated in the 1st, 12th, and 19th years of his reign.

At *Besárh* I found the ancient Vaisáli. There is a ruined fortress 1,600 feet long, by 800 feet broad, with its ditch still in good order. There is also a tope, covered with Musalman tombs, and the ground to the south of the fort is strewn with large bricks. The building of the fort is attributed to Rajah *Bisál*.

Two miles to the north of Besárh stands the Bukhra Lion Pillar, and another ruined tope. Immediately to the south of the pillar there is a tank which is certainly the celebrated *Markaṭa hrada*, or Monkey Tank, on the bank of which formerly stood the *Kuṭágára* Hall in which Buddha first made known his approaching Nirván.

At Kesariya there is a middle age tope of cylindrical form, standing on the ruins of an ancient hemispherical tope. The tope is attributed to Rajah Ben Chakravartti.

The two pillars bearing Asoka's inscriptions stand to the north and south of Bettiah. Hodgson's names of Radhia and Mathia serve only to mislead. Each of the pillars is called Laor (Lowr) and the adjacent village in each case is called *Laoriya*. The southern Laoriya is a small village, but it is close to the celebrated Hindu shrine of Ara Ráj Mahadeo, and is two miles distant from *Rarhia*, a small village to the west. The northern Laoriya is a large village. It is, however, to the north of Bettiah, a little west, instead of to the west a little north as stated by Hodgson, and it is at least fifteen miles from the Gunduk instead of being on its bank. From Prinsep's notice, I infer that Hodgson's information was derived from a native Múnshi who wrote in Persian. The native evidently shirked the Phallic name of Laoriya and substituted the names of other villages. Mathia is a tolerably large village two miles to the south-west of the northern Laoriya. The pillars themselves are objects of worship. I copied the two inscriptions which are generally in very good order. About half a mile to the south-west of the northern pillar there is a gigantic mound at least eighty feet high, and about four hundred feet in diameter at top. This is the ruined fort of *Navand-garh*, a name by which I would purpose to call the northern pillar, while the southern pillar ought perhaps to be called Ara-Ráj. North and South Laoriya are the simplest names, but perhaps Navand-garh Laoriya and Ara-Ráj Laoriya might be preferred. Under any circumstances Radhia and Mathia must be given up.

Immediately to the west of the northern pillar there are numerous earthen mounds, some of them from forty-five to fifty feet in height. These I take to be earthen Topes or Barrows, the most ancient form of the Stupa. Two or three of these should be carefully excavated. I dug up two of the numerous smaller mounds without any result. But, as both Major Pearse and Mr. Lynch have found relics in superficial excavations, I feel satisfied that the larger mounds on which brick buildings of some kind have once existed would well repay excavation.

At *Kasiya* I opened the cylindrical tope on the mound. This tope is a middle-age one, and the mound itself is the ancient tope. There is a second ruined brick mound to the eastward on the bank

of a jhil. This is still loftier being fifty feet in height. Both of these ruined topes should be opened. I am quite satisfied that these topes stand on the site of the celebrated Kusinagara. I surveyed the ground carefully. The Hirana Nadi (or Chota Gandak) once flowed close past the topes, and I found the village of *Anirudha* with a ruined mound immediately to the south of the topes. Aniruddha was a cousin of Buddha, and the senior disciple present at his death, who conducted all the proceedings up to the arrival of Mahakasyapa. The plain between the topes is covered with low earthen tumuli from three to five or six feet in height. I opened three of them, but without any result, although they were said to be the tombs of gipsies!

Khukhundo is a very remarkable place. There are about twenty-five ruined mounds scattered over about one square mile, to the west of the village. The statues now existing about the ruins are Brahminical, chiefly of Vishnu. There is a small Jain temple, and there are several Jain figures scattered about. I opened one of the mounds and came upon the floor of a temple, with the *Yoni*, or receptacle of the *Lingam*, still standing in its original position. The temples have been overthrown by the trees which were planted close to them. These mounds would, I believe, repay the trouble of excavation. But the work could not be satisfactorily done under one month.

At Kahaon I found, close beside the pillar, the ruins of two small temples, one of which was still standing when Buchanan visited the place. The villagers informed me that it was overthrown by a Pipal tree, which I fully believe, from the appearance of the ruin which was lying in one mass, just as if it had sunk slowly down.

At Hathyâda, I found a pillar and stone elephant and tank of the time of Govinda Chandra of Kanoj, S. 1201.

At Bhitari, I made a copy of the inscription on the pillar, which is in a worse condition than when I first saw it, in January 1836, and one portion of the inscription has peeled off. I made an excavation at its base, and found a brick stamped with the name of Sri Kumara Gupta. On making enquiry, I found that bricks thus inscribed are frequently found amongst the ruins, and I soon obtained four more broken bricks with portions of the same inscription. This discovery shows that Bhitari must have been a favourite place of Kumára Gupta. All the mounds have been covered with Musalman tombs. There is an old stone bridge with painted arches built

by the Musalmans with stones stolen from temples. There are also some fine pieces of sculpture of the age of the Guptas.

At Sárnáth Benares, I completed a survey of the ruins and copied all the letters roughly cut on the stones of the great tope as mason's marks. These point to the age of the Guptas as the period when the tope was *begun.*

During the next season I propose to visit Kausambi, Sultanpur, Fyzabad, Sahetmahet, Kanoj, Pamkissa, Mathura, Bhabra, Delhi, and Khalsi Kangra. I shall perhaps pay a visit to Rohtâs while my camp is proceeding towards Mathura, and if time permits I will pay a visit to Sangala in the Panjab.

My principal coin acquisition since I last wrote to you, has been a tetradrachm of Pantaleon. *Obverse,*—Bare diademed head of the King to right—very like Agathokles, with a fuller and larger head, but with the same remarkable nose within a circle of small dots; *Reverse,* Jupiter *seated* and holding the Diva-triformis, or three-headed Hekate in his right hand—Legend, Basileôs Pantaleontos. The coin was covered with oxide when found, and was very roughly treated before I got it. But it is still in very fair condition; particularly the Obverse, which is remarkably bold and the head highly raised.

I have an obolus of Alexander the Great, weighing 11½ grains, a perfect beauty, and the only coin of this size of the Great Conqueror of which I can find any account.

A new gold coin, weighing 74 grains, has also come into my possession. Obverse,—a horseman with legend (Ha) rsha Deva; Reverse: Lakshmi seated on a lotus throne. It may perhaps be a specimen of Harsha Deva of Kashmir.

I have also a very good didrachm of Menander, with the head helmeted, a drachma with Obverse: helmeted head, the helmet wreathed,—and Reverse: a cock and legend ΣΩΦΥΤΟΥ. I believe this coin belongs to Tyre, which for a short period was under the rule of Judges, —"*Suffetes.*"

I have obtained the seal, with an impression of Buddha's feet on an altar, and accompanied by two attendants with joined hands. The name of the owner of the seal, I have not yet been able to make out."

A letter was received from Major Pearse, containing a communication regarding Buddhist remains in upper India.

A letter from Babu Nundo Lal Bose, intimating his desire to withdraw from the Society was recorded.

The following gentlemen, duly proposed at the last meeting, were balloted for, and elected ordinary members.

Babu Dhunpati Singh Dooghur.

S. B. Partridge, Esq., M. D.

The following gentleman was named for ballot at the next meeting.

Dr. Bhau Daji, Bombay,—proposed by Dr. F. E. Hall, seconded by Mr. Cowell.

The President proposed on the part of the Council that the Right Hon'ble the Earl of Elgin and Kincardine should be requested to become the patron of the Society.

Resolved that a deputation consisting of the President, Vice-President, and Secretaries, be appointed to wait on His Excellency and prefer this request on the part of the Society.

The nomination of Col. R. Strachey to be a member of the Council vice Col. Yule, as reported at the last meeting, was confirmed.

The Council reported that they had appointed the Hon'ble C. J. Erskine a member of their body, vice Sir Bartle Frere, and that Col. Strachey had been added to the Natural History and Meteorological Committees.

They also reported that they had appointed a Committee of Papers as provided by Rule 77, to consist of the following members:—

E. C. Bayley, Esq., and Col. R. Strachey.

With reference to the proposed amendment in the rules notified by the Council at the last meeting, and referred back to them for report under the provisions of rule 43; the following report was submitted.

REPORT.

The Council beg to explain as follows their reasons for proposing the adoption of the amendments in the code of Bye-Laws of which notice was given at the last meeting.

1st Proposal.

To amend rule 43, by the insertion of the words "unless originated by the Council" after the word "then" in line 5.

By this amendment it is intended to obviate what appears to be a needless delay in re-submitting to the Council propositions which have emanated from them, and on which they can conveniently report at the time of notifying them at a General Meeting.

2nd Proposal.

To add the following clauses to rule 46.

"The Council shall have the power of appointing any other day not later than that day fortnight, for the annual meeting."

"After the termination of the regular business of the annual meeting, the meeting may be considered an ordinary general meeting."

Under the rule as it now stands, the annual meeting must be held on one particular day and on no other. Experience has shown this to be inconvenient.—The Council, therefore, propose that a limited discretion shall be conferred on them to alter the day when it appears expedient to do so.

The object of the 2nd clause proposed in this amendment is to give greater interest to the January meeting. Few members are found to attend when the business is confined to routine official statements and reports.

3rd Proposal.

To omit clause 1 of Rule 60, which provides that the names of visitors allowed to be present at a meeting shall be read aloud by the chairman.

This rule has fallen into abeyance, and as it is not considered desirable to enforce it, the Council recommend that it should be cancelled.

Resolved that the July meeting be made special to decide on these proposals.

The Council submitted the following report from the Meteorological Committee, and requested authority to address Government in the sense of the Committee's recommendations.

The Committee having had under their consideration the general measures to be adopted to further the objects with which they are specially concerned, have come to the following conclusions.

The value of the study of meteorological phenomena in a scientific and abstract point of view needs no discussion. Nor is the practical importance of this science in any degree less great than that of any other branch of physical knowledge.

Every where the occupations of man, whether on the land or on the sea, are intimately bound up with the changes of the seasons, with the fall of rain, with the directions and forces of the winds, and

his very existence may be said to depend in great measure on the operation of atmospheric influences. The immediate connexion of health with climate is brought home to every one. Any progress made in a clear appreciation of the laws that regulate these phenomena, will therefore more or less directly become of real practical utility to us all. It is not intended to be said that we are ever likely to be able to bend the forces of nature as brought into play in atmospheric changes, so as to regulate the seasons or the winds to our will, this of course is unreasonable. But to know what is probable, to foresee what is the inevitable result of certain antecedent causes, is what we may expect. Indeed this practical application of meteorological science is already taking a very definite form, and the reports of the meteorological department of the Board of Trade in London are now generally accepted as giving a fair approximation to the course of the winds and weather for a day or so at least in advance, and as such are daily becoming of more practical utility to the mercantile world.

In India where the accidents of the seasons, so to speak, are developed with the intensity peculiar to tropical regions, there can at least be no smaller degree of value in such practical applications of science than in Europe. And to those who carry in their recollection the horrors of the late famine, it will be needless to say how inestimable a benefit would any thing be that would enable us to foresee these terrible calamities, and to prepare to meet them. Nor is there any thing at all unreasonable in anticipating that as the application of scientific knowledge now enables the sailor to foresee and avoid what used to be thought the irresistible and fatal hurricane, so this knowledge may be equally applied under other circumstances in enabling us to foresee and avoid what now seems the equally irresistible and equally merciless desolation caused by drought.

But the necessary precursor of the practical application of any science, is a careful, laborious and intelligent study of the actual phenomena; and it is obviously to this means that we must look here as elsewhere.

Nor need the intensity of tropical storms, or the extreme irregularity of the rain, which in one year will fall in a flood, while in another it will be scanty to such a degree as to create a famine, cause us to entertain any especial apprehension that we may there-

fore be unable to trace back their causes. For it is certain that in proportion as effects are extreme, causes are in fact strongly marked, whether we see them or not.

In truth, all meteorological phenomena are more or less directly dependent on the action of the sun on the earth's surface, and just in the same proportion as the power of the sun is great in a tropical country, so are atmospheric phenomena strongly marked, and so have we a right to expect greater facility in investigating their laws.

It is indeed, we believe, to observations made in tropical countries that the science of meteorology will eventually be indebted for any great advance that it may make.

Having these views, we are strongly impressed with the real importance of the study of this branch of science in India, and we hope that something may be done to give method and consistency to the many unsystematic and independent series of observations that are in fact now made in various parts of the country under various agencies.

The most important meteorological observations made in the Bengal Presidency are those of the Surveyor General's Department at Calcutta. They have been maintained for many years with all reasonable precautions to secure accuracy, so far as we are informed, and we feel that we are much indebted to the Government for them. Other similar series are made at Bombay and Madras. But till now we have never had any really systematic observations of this sort anywhere in the interior of the great continent of India under British rule. There have been many isolated series for short periods which are of a certain value, but for the purposes of science it is most important that the observation should be made at one and the same time over a large area, and in such a manner as to be really comparable one with another, which is very far from being the case in most of the old registers.

Next we may mention the observations made on the ships either of the Government or of private persons. With some little additional attention, these might be made of the highest utility as contributions to our knowledge; at present they can hardly be said to be brought into the common stock at all.

Besides the more systematic registers, there are many other re-

cords of this sort kept up which are of considerable value and might be made much more so with a very little arrangement. Thus a register of rain fall is kept, we believe, in every district in India, and has been so kept for a very long series of years. If made with fair care these records might be invaluable in a scientific point of view.

Again the medical officers of the Government, all over the country, are expected to keep certain meteorological registers in their hospitals. We have no doubt that these records are kept by many medical officers with great care and accuracy. But on the other hand it is not to be denied that a large number of them are made with no sufficient attention. Further they are not truly susceptible of comparison one with another from the very different ways in which they are kept; and as it is impossible to distinguish the good from the bad, the value of the whole of them is very much diminished if not altogether lost.

Lastly, we would observe that the very essence of the value of such observations is, that they should be brought into relation one with another.

If when made they are only to be put into a cupboard, they had far better not be made at all. If it be worth the trouble to make them, it is worth the trouble to use them; and using them means reviewing them, as a whole, in a regular systematic and scientific manner.

We do not conceal from ourselves that the difficulties in the way of such a methodic system of meteorological observation are great, but this is no reason for not attempting to overcome them.

On the whole, considering the circumstances of the country, and the fact that the great majority of observers will commonly be officers of the Government, what seems to us the course most likely to have a useful effect would be for the Government to constitute a Board of visitors of the Calcutta Observatory, for the purpose of making suggestions on this and kindred subjects. The difficulty of finding any individual with the scientific knowledge, theoretical and practical, necessary to make him a perfectly safe guide in such matters is acknowledged to be almost insuperable even in England. In India the thing is perfectly impossible, and the pressure of business on most persons interested in science is a further ground for trusting rather to a Board than to any individual adviser.

The Committee would wish it to be understood that the Board, the constitution of which they suggest, should have no power whatever excepting to offer its opinions on the subjects to which allusion has been made in this Report and perhaps on other kindred matters of science. It is not, however, for the Committee to offer any decided opinion as to any thing beyond the meteorological aspect of the questions. The Board would of course be purely honorary. It does not appear essential that all of its members should be residents in Calcutta or even in this Presidency.

The Committee have no doubt that if such a Board were constituted from the leading men of science in India, its recommendations would be received with thankfulness by the Government, and by all individual observers, and that such recommendations would practically carry with them sufficient weight to give that spirit of unity and method to all meteorological observations which is so entirely wanting at present, and which is so essential to any real progress in the science and its practical application.

Some remarks were made by Colonel Thuillier, on the subject of the recommendation which the Council proposed to submit to Government, and after a discussion in which Col. Strachey, Mr. Oldham, Col. Douglas, Mr. W. T. Blanford and other members joined, it was resolved that the Council be empowered to address Government in furthrance of the general objects advocated in the Report; but instead of a Board of visitors of the Calcutta Observatory, to recommend the appointment of a meteorological Committee, for the purpose of making suggestions on the best practical way of promoting those subjects.

The following report of the Phil. Committee was recommended by the Council and adopted.

REPORT.

The Philological Committee recommended to the Council that Pundit Nabadwip Chunder Goswami's offer be accepted to edit the prose Sankara-dig-Vijaya of Anantánanda Giri. The Society, last year, accepted a proposal to edit the poetic version by Mádhava, as it seemed at that time hopeless to obtain MSS. of the prose work, but the Secretary has lately obtained several MSS. through Dr. Hall and pundit Lingam Laksmoji of Vijayanagaram, and the printing of Mádhava's work, which had just commenced, has been stopped; and

it is now proposed that the older prose work should be edited in its stead.

Professor Wilson's "Hindu Sects" was mainly based on the present Digvijaya, and the Sarvadars'ana Sangraha of Mádhaváchárya which was published in No. 63 and 142 of the Bibliotheca Indica, and European scholars have frequently asked for an edition of Anantánandagiri's work. It contains the legendary history of Sankara Achárya and his times, and amidst much that is misstated and untrustworthy, throws great light on the state of the Hindu mind at that period and the philosophical ideas then prevalent.

The work will occupy not more than three Fasciculi.

They also recommend that Mr. Cowell's offer be accepted to edit the Maitri or Maitráyani Upanishad with Rámatírthá's commentary, and an English translation. It will occupy about two Fasciculi.

Dr. Weber in 1855 (Indische Studien, vol. 3, p. 480) remarked that the Society had published editions of all the more important Upanishads, with the exception of the Kaushitaki, Maitráyani and Váshkala. At the beginning of this year we published an edition of the first; the present proposal takes up the second. Of the third we have very slender hopes, as though its translation is given in D'anquetil du Perron, no traces of the Sanscrit original have as yet been discovered and the name does not occur in the very full Telugu list of Upanishads furnished by W. Elliott, Esq., and published in our journal for 1851.

ADOPTED.

Communications were received—

1. From Babu Gopeenauth Sein; abstracts of meteological observations taken at the Surveyor General's Office in November and December last.

2. From F. E. Hall, Esq., a paper containing some fragments of Ravana's commentary on the Rig Veda.

3. From W. T. Blanford, Esq., contributions to Indian Malacology., No. 3, containing description of new operculated land shells from Pegu, Aracan and the Khasi hills.

4. From W. Theobald, Jr., Esq Notes of a trip from Simla to the Spiti Valley and Chormorre (Tohomoriro) Lake during the months of July, August and September last.

Extracts from this paper were read by the author, for which a vote of thanks was passed to him.

Mr. Oldham moved that the above papers be referred back to the Council for consideration, with a view to their publication.

Dr. Fayrer seconded the motion.

The President proposed as an amendment

That it be left to the discretion of the Secretaries in communication with the Committee of papers and in the conduct of their duty as Editors of the journal, to consider the question of their publication.

A discussion arose which was terminated by the adjournment of the meeting being carried on the motion of Col. Strachey.

Library.

The undermentioned books and periodicals have been added to the Library since the meeting in April.

Presented.

Calcutta Christian Observer for April.—By the Editor.

Official, Classified and Descriptive catalogue of the contributions from India to the London Exhibition of 1862.—By the Board of Revenue.

Dickinson's address to members of the House of Commons—*Pamphlet.*—By the B. I. Association.

On the origin and authenticity of the Arian family of Languages. By D. Framjee.—By the Author.

Journal of the Statistical Society of London for March 1862, Vol. XXV. Part 1.—By the Society.

A list to the end of 1861 of the Fellows of the Statistical Society.—By the same.

Journal Asiatique, Vol. XVIII. Nos. 71 and 72.—By the Paris Society.

Kumára Sambhava, 8th Sarga, edited by Pundit Prem Chandra Tarkabágísha with his commentary.—By Mr. E. B. Cowell.

Memoirs of the Geological Survey of India—Palæontologia Indica, Vol. I. Part 2.—By the Superintendent of the Survey.

Ditto Ditto.—By the Government of India.

The Oriental Baptist for April.—By the Editor.

The Oriental Christian Spectator for January.—By the Editor.

Proceedings of the Royal Geographical Society of London, Vol. V. No. 5, and Vol. VI. No. 1.—By the Society.

Proceedings of the Royal Society of London, Vol. XI. No. 47.—By the Society.

Quarterly Journal of the Geological Society of London, Vol. XVIII. No. 69.—By the Society.

Reinaud's Memoire Sur les commencements.—By the Author.

Exchanged.

The Athenæum for January and February, 1862.

The Philosophical Magazine, Vol. XXIII. Nos. 152, 153.

Purchased.

The Annals and Magazine of Natural History, Vol. IX. Nos. 49, 50, 51.

The American Journal of Science and Arts, Vol. XIX. No. 97.

Abhandlungen fur die kunde des Morgenlandes Gesselschaft, Vol. II. No. 3.

Sanskrit Worterbuch, (Roth and Boehtlingk.)

Comptes Rendus, Tome LIII. Nos. 21 to 27 and Tome LIV. Nos. 1 to 8 with an Index to Tome LII.

Flugel's Mani.

The Literary Gazette, Nos. 182 to 191 and No. 193 of Vol. VII. New Series.

Maynard's Dictionnaire de la Perse.

The Natural History Review, Vol. VII. No. 5.

Numismatic Chronicle and Journal of the Numismatic Society, New Series, Nos. 1 to 4.

The Quarterly Review, Nos. 220, 221.

Revue des Deux Mondes for 15th January, 1st February, 15th February and 1st March.

Revue et Magasin De Zoologie, No. 12 of 1861.

Reinwald's Catalogue Annuel Libraire Francais, Vol. IV.

Reeve's Conchologia Iconica, Nos. 214, 215 and 216.

Raverty's Translation of the Selections from the Poetry of the Afghans.

Spiegel's die altpersischen Keilingschriften.

Annales des Sciences Naturelles—Botanique, Tome XIV. No. 6.

Vuller's Lexicon, Fas. VI. Part 3.

Vendidad Sadi, Part 7.

The Westminster Review for January, 1862.

Windischmann's Sancara.

Journal des Savants for December, January and February.

Lalgopal Dutt.

For June, 1862.

The Meeting of the Asiatic Society was held on the 4th instant.

A. Grote, Esq, President, in the chair.

The Proceedings of the last meeting were read and confirmed.

Presentations were received—

1. From Major J. C. Haughton a Silver coin found at Kurn Bil near Jubbulpore, and a Lead Siamese coin found at Tavoy.

The following is a letter from Major Haughton on the subject :—

My dear Atkinson,

I have the pleasure of handing for addition to the Society's collection two coins.

The silver coin was obtained by me many years ago from the side of Kurn Bil near Jubbulpore. It is of a type common as far as Caubul. I think it is figured by Prinsep and described by Cunningham.

The large Leaden coin is an ancient Siamese one, part of a "treasure trove" dug up at the capital of Tavoy—Waydee—during the year 1857. The inscription is almost entirely illegible. I believe the figure on the obverse is intended to represent a dragon.

Believe me,

(Sd.) J. C. Haughton.

2. From the Geological Society of London, several publications of the Society.

3. From the Imperial Academy of Vienna, several publications of the Academy.

4. From the Imperial Academy of St. Petersburgh, several Nos. of the Memoirs and Bulletin of the Academy.

5. From Mr. Woodrow, two silver coins from the Sunderbuns.

6. From L. S. Jackson, Esq., C. S., a silver coin.

The following is a note on the coin by Mr. E. C. Bayley :—

This coin, which was found by Mr. L. S. Jackson, C. S, at Rajshahye, belongs clearly to the Bengal Pathan series.

Its inscription, though for the most part in good order, is not altogether legible ; it bears a date, which in ordinary Arabic numerals, reads 933, on the strength of which Mr. Laidlay has assigned it (Bengal Asiatic Society's Journal Vol. XV. p. 333) to Mahmood Shah, son of Hussen Shah, the last of the Independent kings of Gour.

The chief difficulty in admitting this attribution is, that we are distinctly told in Stewart's History of Bengal, who, however, does not quote his authority, that Mahmood Khan sueeeeded his nephew, whom he murdered in 940 A. H.; and, secondly, that he died in 945, after a reign, including the period of his deposition, of five years.

This information is emphatic and precise. Mr. Laidlay does not seem to have had Stewart's History before him, as he confounds this Mahmood Khan with Mahmood, the son of Duria Khan Lohani, the distinction between each of whom and Mahmood Khan Lodi, all successively kings of Bengal at or about this period, is clearly drawn in a note at page 131 of Stewart's History. Moreover the obverse legend calls the king "Gheiasuddeen," a title which there is nothing to show, as far as I know, that Mahmood Shah ever assumed, and the word in the obverse legend, which Mr. Laidlay read as "Abool Mozuffer," cannot, on the present coin, be so taken. I at first read it as Ibn Toghlak, and for this reason was inclined to read the first figure on the date as a Bengali seven, and so to throw the coin back by two centuries,—considering the obverse inscription as that of Mahomed bin Gheiasuddeen Toghlak of Delhi, who was also the Suzerain Sovereign of Bengal, and believing the reverse to bear that of Bheiram Shah, whom Mahomed Toghlak made king of Bengal at Sanargaon in 725 or 726 A. H., and who died in 739 A. H.

But I must confess that the concluding formula of the reverse legend (Khallad Allah Mulk wa Sultanat) comports better with the later date, as it has I think been found hitherto on no coins earlier than those of the Lodi Dynasty.

Still the discrepancy of dates is almost too great to be accidental. To Mr. Laidlay's reading, (Nazir Shahi) moreover of the central legend the present coin gives little colour.

Mr. Laidlay distinctly says that he had several specimens and varieties of the coin before him while writing; it is probable, accordingly, that his attribution had better grounds than the sole coin which he has figured, would afford.

The attribution of the coins must therefore I think be considered open to future revision.

Read a letter from Mr. Stainforth, requesting that his withdrawal from the Society might be cancelled.

Agreed to.

Read the following letter from Mr. E. C. Bayley, Secy. to Govt. of India, in the Home Dept.:—

From E. C. Bayley, Esq.,

Secretary to the Government of India.

To W. S. Atkinson, Esq.,

Secretary to the Asiatic Society.

Dated Fort William, the 22nd May, 1862.

Home Department.

Sir,—With reference to the correspondence noted in the margin, I am desired to inform you that, in the opinion of the Governor-General in Council, the time has arrived when the foundation of a Public Museum in Calcutta, which has been generally accepted as a duty of the Government, may be considered with a view to its practical realization, and when the proposition which emanated from the Asiatic Society in 1858, "for the foundation of an Imperial Museum, to which the whole of the Society's collections, except the Library, might be transferred" may with propriety be entertained.

From the Asiatic Society No. 308, dated 8th October, 1858.
To ditto in reply No. 2700, dated 8th December, 1858.

2. This proposition was made conditionally on the approval by the Society at large "of the locality, general arrangements, and managements," of the Museum; and it is, therefore advisable at once to state generally the views of the Government on these points.

3. The Governor-General in Council considers it to be essential to the success and good management of the Museum that the control of all the collections which it may contain should be always unreservedly vested in one and the same authority.

4. It is accordingly thought right that the whole of the collections, including those to be transferred by the Asiatic Society, those contributed by the Government, and all future additions to the Museum, shall be placed under the sole management of a Board of Trustees.

5. His Excellency in Council acknowledges the importance and value of the collections which the Asiatic Society has offered to transfer to the Public Museum, and the just claims which the Society has to share in the management of an institution, the foundation of which will be so much dependent on these contributions and on the previous labours of the Society.

6. The Governor-General in Council also fully recognizes the historic association connected with the Asiatic Society, its present high position and reputation, the great services which it has rendered to Literature, Archæology, and Science, and the assistance which it has afforded from time to time in developing the material resources of India.

7. His Excelleney in Counеil, therefore, considers that it will be both just and appropriate to secure to the Society a liberal share in the control of the Museum, by constituting its representatives members of the Board of Trustees in such proportion, and under such conditions, as may be hereafter determined.

8. The Governor-General in Council is further prepared to furnish whatever accommodation may be requisite for the business of the Society, and for the reception of its Library, in close proximity to the proposed Museum. This accommodation would of course be assigned to the exclusive use of the Society, and would be given in exchange for their present premises, which under this arrangement, would become the property of Government.

9. With regard to the locality of the Museum, the Governor-General in Council, as at present advised, considers that it may most advantageously be placed on the site now occupied by the Small Cause Court in Chowringhee Road, and he is disposed to believe that some such building as that which has been recently proposed by Dr. Oldham (himself a member of the Society's Council) for the Government Geological Museum will be well adapted to the purposes of the General Museum.

10. His Excelleney in Council would suggest "The India Museum" as an appropriate name for the Institution.

11. I am directed to submit the above outline of the measures which the Governor-General in Council would propose to adopt for the consideration of the Asiatic Society. If they meet the wishes of the Council and of the Members of the Society at large, His Excellency in Council will be happy to receive any suggestions upon matters of detail which the Society may wish to offer, with a view to secure more completely the interests of the proposed Museum, as well as those of the Society.

I have &c.,

(Sd.) E. C. Bayley,

Secretary to the Government of India.

The President intimated that the Council were considering the course which they should recommend the Society to pursue in reference to the offer now made to them by Government.

The Council reported that the election of Nawab Mohammad Khazam Ali Khan had been cancelled at his request.

The nomination of the Hon'ble C. J. Erskine to be a member of the Council, *vice* Sir B. Frere, was confirmed.

The Council reported that they had appointed the Hon'ble W. Grey, a member of their body, in the room of the Right Hon'ble S. Laing.

With reference to Mr. Oldham's proposal to amend rules 78 and 86, of which notice was given by him at the April meeting, the Council reported that they considered the adoption of these amendments would be inexpedient.

The President observed, that the purport of this proposal of Dr. Oldham's had been recommended to the Council by himself two years ago, but that he had not suggested any alteration in the rules, because it seemed to him that the present rule, which provided for an annual election of all office-bearers, was sufficient. All that was necessary was for the Council to act on his recommendation when preparing their next list of nominations for office. He was glad that the Council had concurred with him in this view, and hoped that his suggestion would be acted on at the next anniversary meeting.

The Council announced that, in accordance with the resolution of the last meeting, a deputation consisting of the President, the Vice-Presidents, and the Secretaries had waited upon the Governor-General pursuant to appointment to request him to become the patron of the Society, and that he had been pleased to accept the office.

A letter from Capt. W. A. Ross announcing his withdrawal from the Society was recorded.

Dr. Bhau Daji, duly proposed at the last meeting, was balloted for and elected an ordinary member.

The following gentlemen were named for ballot at the next meeting :—

Hon'ble T. J. H. Thurlow, proposed by the President, seconded by Dr. Macrae.

J. Gordon, Esq., C. S., proposed by the President, seconded by Dr. Macrae.

A. M. Monteath, Esq., C. S., proposed by Archdeacon Pratt, seconded by Mr. E. C. Bayley.

Captain Hyde, Bengal Engineers, proposed by Lieutenant-Colonel Thuillier, seconded by Major J. E. Gastrell.

Baboo Bhola Nauth Mullick, proposed by Moulavi Abdul Luteef Khan Bahahur, seconded by Mr. Atkinson.

The Hon'ble Major General Sir Robert Napier, K. C. B., proposed by Lieut.-Colonel Thuillier, seconded by the President.

Major Allen Johnson, Bengal Staff Corps, proposed by Lieut.-Colonel Thuillier, seconded by Mr. Atkinson.

Mr. W. Theobald, Junior, exhibited some celts which he had found in Bundlekund, and some chert implements from the Andamans, and read the following note on the subject:—

During the past cold season I had the opportunity of examining a portion of the country in which Mr. Le Mesurier first discovered celts (vide J. A. S. No. I. of 1861) and I was so fortunate as not only to collect a fair series of these weapons, but also to ascertain their extension upwards of 200 miles East of the Tons River which Mr. Le Mesurier in his Memoir considered as their boundary in that quarter. In other directions I had not the opportunity of tracing them, but that their range extends over a much larger area than is at present assigned them in Bundlekund is almost a certainty. Of the most marked varieties of these implements I shall give a short description, that any one so minded may satisfy himself of the precise identity of these celts with those found in Europe, in confirmation of which I may quote Mr. Oldham, whose acquaintance with stone weapons from Irish and European localities, is very extensive. There is something, however, very peculiar in the mode of occurrence of these weapons, which must be cleared up hereafter, for though they may be traced as far into Behar as I have stated above, it is only west of the Tons that they are plentiful; for (rejecting a dubious case) I have not as yet obtained a single *perfect one* east of that river. The most natural explanation of this appears to be some superstition which induced men of old time to collect these relics of a still older age and convey them to the shrines and localities where they are now so abundant, so that celts collected over thousands of square miles are now accumulated about Karoi (Tirhowan or Kirwee) and its environs. This is of course a mere hypothesis, but agrees well with the scarcity of

other stone weapons compared with the multitude of celts, one *stone hammer* and a single *arrow head* only as recorded by M. Le Mesurier in addition to the numbers of celts scattered by threes and fours under pipal trees and in temples about Karoi. In the same neighbourhood a stone *punch* or *chisel* was procured by me and at Powari *east of the Son River a stone hammer*, which should encourage us to search more diligently for other relics of this most interesting *stone period*.

Very few of the celts in this collection offer any evidence of their ever having been fixed in handles, and where such has been the case, it was probably by a race of far more recent date than the original fabricators, for it is difficult to conceive a form less adapted for such a purpose than the typical celt or more liable to be always falling out: this difficulty is greatest in the case of the smallest celts and when we consider that a little flattening or notching the sides could have enormously facilitated their retention in any handle, it seems difficult to suppose that their original makers ever so used them. Can Nos. 1, 7 or 12, ever have been so used? No. 4 though merely chipped and not smoothed at the sides, presents the most perfect cutting edge of any in the collection, and what could have been easier than to fashion its sides if ever intended for a handle, or what form can possibly be suggested as *less applicable* for firm retention in a socket than that given to it, carefully wrought though it be? Some celts perhaps may have been fitted to handles, but hardly I think by their original makers, for reasons above stated, unless No. 6 is an exception. This celt presents a curious pit or depression on one side which might have been intended to receive the head of a handle and could certainly have contributed to its firm retention, though but slightly, and the general form is as in all celts singularly ill-adapted for such an application. The only other possible use I can suggest for this depression is, that of breaking nuts or fruit stones, which would not be so likely to fly off or slip aside if struck with the cupped side of this celt.

Celt No. 14 is the only one in the collection which exhibits any traces in fact of an adaptation fitting it for a handle, and it only differs from others in certain rude notches cut in the side, which certainly suggest the probability of their having been made to receive some sort of lashing. Their rough finish, however, suggests doubts of their being as old as the original date of the weapon. The several typical

forms of European celts may be recognized in our Bundelkund ones, though in the illustrated catalogue of Irish antiquities in the Dublin Museum there is nothing figured like the stone hammer or mallet found by me at Powari. The most probable use for which this article was designed was probably pounding, but it is doubtful if it was not furnished with a high celt-shaped handle, as just above the neck it has suffered fracture. It is also fractured at the base, seemingly from accidental usage, but enough remains of the smooth basal surface to indicate its form beneath, and show the purposes to which it was probably applied. The neck or shoulder is very smoothly finished, but more specimens are required to indicate the normal shape of the perfect instrument. Weight 1 lb. 9¾oz. Only one other blunt weapon was found, which though perhaps used for similar purposes is much lighter and very different in shape, which is much that of a common native wrought iron pestle. It has a flat top at one end and probably a blunt edge at the other, though now much worn down. It was never very highly finished and weighs only 9½ ounces. One of the most interesting celts in the collection is the very rude one which exhibits scarcely any signs of manufacture, and might readily enough be mistaken for an accidental fragment of rock. The natives, however, about Karoi possessed sufficient archæological acumen to perceive its nature, and have adorned it with a daub of red paint as Mahadeo, together with others of greater pretensions to divine honours than it. Whether accidentally or not, it exhibits the inæquilateral outline observable in many finished celts, and which was for some cause or other intentionally produced. The must curious point, however, about it is the presence of a few notches in the edge, which, as the stone is much decayed, may have originally been more conspicuous. That they are notches there is no doubt, but to have served any purpose, they must once have been much deeper, when they might have acted as a rude saw, the only instance of such a tool in stone I am acquainted with. Of many score celts, this is the only one of this rude type I have seen. The one marked from Debru ghat on the Soane is perhaps as unfinished, but it may once have had a finer edge, and its claims to be considered a celt are not conclusive.

The small fragment from Sibdilla is interesting as showing how certainly the merest portion of a celt may be recognised, as regarding this fragment, small as it is, there can be no doubt; and as proving

incontestably the former extension of these relics, on a very large area, as Sibdilla is a town of Behar not far from the hills, but 200 miles east of the Tons and the celt district proper about Karoi or Tirhowan.

Most of the celts it will be seen once possessed a very sharp edge, but there are some in the collection as Nos. 12, 13, 17 which though well-finished, never seem to have been ground down to a cutting edge and were probably used for other purposes than the sharp edged ones, though what precise use that was, can scarcely be guessed at. For comparison with these implements, I have laid on the table a few stone chips for which I am indebted to Major Haughton from the Andamans, the most finished of which might have been intended for arrow-head, but the majority of which chips seem merely intended to be used with the fingers in dividing fish or flesh. The round stone is also from the same quarter and seems to have been used for much the same purposes as the stone hammer from Powari. The four chips marked with a cross may have very well been intended for tipping arrows, to be used only against fish, but none of them would have been very effective against the Andaman pig or indeed any land animal. As, however, the Andamanese chiefly depend on fish, which they shoot with arrows for their food, Major Haughton is probably correct in regarding many of these chips as arrow-heads, though of a far slighter character than the arrow-heads which are usually found accompanying celts. The small agate fragment from Behar bears the appearance of being the remnant of a larger shear, and whether intended as an arrow-point or not, is, there is little doubt, an artificially formed piece of stone.

A lump of chert from which chips have evidently been struck off was found by Major Haughton together with the chips in a native encampment and but from the place it was found in, would never have attracted notice, though on examination it is clearly enough seen to be the parent of chips, such as accompany it. The following table gives the weights and dimensions of the long and short axes and thickness of twelve selected celts, all from the Karoi district, varying from 4lbs 9 oz. to 2 oz. 335 Grs.—the great bulk of the collection, however, ranging from $\frac{3}{4}$ to $1\frac{1}{2}$ lbs.

PLATE OF CELTS TO ACCOMPANY MR THEOBALD'S NOTE ON CELTS FROM BUNDULKUND

Figs. 1 to 17 [illegible] the natural size

PLATE OF CELTS TO ACCOMPANY Mr THEOBALD'S NOTE ON CELTS FROM BUNDULKUND.

	lbs.	*oz.*	*gs.*	*Length.*	*Breadth.*	*Thickness.*
No. 1	4	9	0	10	4	$2\frac{4}{8}$
„ 2	3	$4\frac{1}{2}$	0	10	4	2
„ 3	2	9	0	$8\frac{2}{8}$	$4\frac{2}{8}$	2
„ 4	2	$1\frac{1}{2}$	0	$7\frac{4}{8}$	$4\frac{5}{8}$	$1\frac{5}{8}$
„ 5	1	$9\frac{1}{2}$	0	$6\frac{5}{8}$	$3\frac{2}{8}$	$1\frac{5}{8}$
„ 6	1	$1\frac{1}{2}$	0	$5\frac{6}{8}$	$2\frac{5}{8}$	$1\frac{4}{8}$
„ 7	0	$18\frac{3}{4}$	0	$4\frac{1}{8}$	$3\frac{2}{8}$	$1\frac{2}{8}$
„ 8	0	8	150	4	$2\frac{3}{8}$	$1\frac{1}{8}$
„ 9	0	5	85	$3\frac{6}{8}$	2	1
„ 10	0	3	280	$2\frac{2}{8}$	$1\frac{6}{8}$	$1\frac{1}{8}$
„ 11	0	3	275	$2\frac{6}{8}$	$1\frac{6}{8}$	$0\frac{7}{8}$
„ 12	0	2	335	$1\frac{7}{8}$	$1\frac{6}{8}$	$0\frac{7}{8}$
„ B.	1	$9\frac{3}{4}$	0	$4\frac{5}{8}$	$2\frac{5}{8}$	$1\frac{5}{8}$
„ C.	0	$9\frac{1}{2}$	0	$3\frac{7}{8}$	$1\frac{7}{8}$	$1\frac{1}{8}$

The material of which these stone weapons from Bundlekund are manufactured differs somewhat in mineral composition and texture, but is, I believe, without exception selected from the geological group named 'Semries' by Professor Henry Medlicott in his report on the district. A sort of greenstone is usually selected, but sometimes a more distinctly schistose rock, and in one case (Fig. A,) a piece of limestone has been used, though in the highly finished ones only the harder and better adapted stones seemed to have been used.

The small fragment from Sibdilla is made of a softish schist ill suited for such a purpose and which has evidently broken along a natural flaw or parting in the stone.

What is remarkable is, that, abundant as quartzite is, it has never been used for the manufacture of celts, though perhaps quartz weapons, especially of small size, may eventually be found. Neither have I ever noticed any celt manufactured from the compact Vindhyan sandstone of the country in which they occur. Too little is, however, known at present of these relics to base any reliable surmise on, and I shall therefore refrain from any further remarks, beyond expressing a hope that the notice will serve to stimulate inquiry, and prove what an interesting field of archæological research lies, as it were, at our doors, and how much light a little energy and zeal may be expected to throw on the unwritten history of the Archaic races of men in India.

Mr. Theobald also exhibited an engraved figure of Athene Pro-

machos on red cornelian of Greek execution, from the North-west; being, according to Colonel Cunningham, a copy of the celebrated statue by Phidias in the Parthenon.

Communications were received—

1. From the Venerable Archdeacon Pratt, a memorandum showing the final result of his calculation regarding the effect of local attraction upon the operations of the Great Trigonometrical Survey of India.

2. From Bábu Gopee Náth Sein, an abstract of Meteorological Observations taken at the Surveyor General's Office, in the months of January and February last.

3. From Captain H. G. Raverty, an account of Upper and Lower Suwat and the Kohistan to the source of the Suwat river, with an account of the tribes inhabiting those valleys.

4. From Bábu Rajendra Lal Mitra, a note on some Bactro-Buddhist relics from Rawul Pindee.

Bábu Rajendra Lal Mitra having read this paper, Mr. E. C. Bayley advanced some reasons which led him to differ from the author in his determination of an inscription upon one of the relics. The original paper and Mr. Bayley's comments on it will appear in the Journal.

The Librarian submitted the usual monthly report.

LIBRARY.

The following are the accessions to the Library since the meeting held in May last.

Presented.

Annals of Indian Administration, Part 1 of Vol. VI. for March 1862.—BY THE BENGAL GOVERNMENT.

Annual Report of progress and expenditure in the Public Works Department for 1860-61.—BY THE GOVERNMENT OF INDIA.

The Proceedings of the Bethune Society for 1859-61.—BY THE SOCIETY.

The Oriental Baptist for May 1862.—BY THE EDITOR.

The Calcutta Christian Observer for May 1862.—BY THE EDITOR.

Transactions of the Zoological Society of London, Vol. IV. Part 7.—BY THE SOCIETY.

The Proceedings of the Zoological Society of London—Part 3 of 1860, and Part 2 of 1861.—BY THE SAME.

The Transactions of the Linnean Society of London, Vol. XXIII. Part 1.—BY THE SOCIETY.

Journal of the Proceedings of the Linnean Society—Zoology, Vol. IV.—No. 16, Vol. V.—Nos. 17, 17,* 18, 19 and 20—Botany, Vol. IV. No. 16, Vol. V.—Nos. 17, 18, 19 and 20 with a supplement to Vol. IV. and two supplements to Vol. V.—By the same.

List of the Linnean Society of London for 1860.—By the same.

Proceedings of the Geological Society of London, several parts from 1826 to 1844.—By the Society.

The Quarterly Journal of the Geological Society, Vol. XVII. Part 4.—By the same.

Transactions of the Geological Society of London, Vol. V. Parts 1 and 2, Vol. VII. Parts 1, 2 and 4.—By the same.

Philosophical Transactions of the Royal Society of London, Vol. CL. Parts 1 and 2.—By the Society.

List of the Fellows of the Royal Society to 30th November, 1860.—By the same.

Memorie della Reale Accademia Delle Scienze di Torino, Serie Seconda—Tomo XIX.—By the Academy.

Bulletin de l'acadèmie Impèriale des Sciences de St. Petersbourg, Tome II. Nos. 4, 5, 6, 7 and 8 et dernier, Tome III. Nos. 1, 2, 3, 4 and 5.—By the Imperial Academy.

Mèmoires de L'Acadèmie Impèriale des Sciences de St. Petersbourg, VIIe. Sèrie, Tome III. Nos. 2, 3, 4, 5, 6, 7, 8 and 9.—By the same.

Jahrbücher der K. K. Central Anstalt für Meteorologie und Erdmagnetismus, VII. Band, Jahrgang 1855.—By the Royal Vienna Academy.

Jahrbuch der K. K. Geologischen Reichsanstalt, Vol. XI. No. 2.—By the same.

Denkschriften der Kaiserlichen Academie der Wissenschaften—Mathematisch—Naturwissenschaftliche Classe, XIX. Band; Philosophische—Historische Classe, XI. Band.—By the same.

Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften—Mathematisch—Naturwissenschaftliche Classe, XLII. Band Nos. 27, 28 and 29, XLIII. Band, Heft I. Abth., 1, Heft II. Abth. 1 and 2, Heft III. Abth. 1 and 2, Heft IV. Abth., 1, Heft V. Abth. 1 and 2; XLIV. Band, Heft I. Abth. 2, Heft II. Abth. 2; Philosophisch—Historische Classe, Band XXV. Heft 5, Band XXVI. Heft 1 and 3, Band XXVII. Heft 1, 2, 3 and 4. —By the same.

Almanach der K. Academie der Wissenschaften, Vol. XI. for 1861.—By the same.

Archiv fur Kunde österreichischer Geschichts-Quellen—Band XXV. 1 and 2 Hälfte—Band XXVI. 1 and 2 Hälfte, and Band XXVII. 1 Hälfte. —By the same.

Uber den Ursprung der Meteorsteine, Von P. A. Kesselmeyer—*Frankfort A. M.* 1860.—By the Author.

Monatsberichte der Königliehen Preuss-Akademie der Wissenschaften Zu Berlin for 1860.—By the Berlin Academy.

Register für die Monatsberichte der Königliehen Preuss-Akademie der Wissenschaften Zu Berlin Vom Jahre 1836 bis 1858.—By the same.

Abdhandlungen der Königliehen Akademie der Wissenschaften Zu Berlin for 1860.—By the same.

The Journal of Sacred Literature and Biblical Record, edited by B. Harris Cowper, Vol. I. No. 1, New Series.—By the Editor.

Journal Asiatique, Cinquiéme Sèrie, Tome XIX. No. 73.—By the Paris Society.

Proceedings of the Royal Society, Vol. XI. No. 48.—By the Society.

Bijdragen tot de Taal-Land-En Volkenkunde van Nederlandsch Indië, Vierde Deel, 4e Stuk.—By the Amsterdam Institution.

Journal of the Royal Asiatic Society, Vol. XIX. Part 3.—By the Royal Asiatic Society.

Journal of the Agricultural and Horticultural Society of India, Vol. XII. Part 2.—By the Society.

A Collection of Treaties, Engagements and Sunnuds, relating to India and neighbouring countries, Vol. 1. containing the Treaties, &c., relating to Bengal, Burmah, and the Eastern Archipelago.—By the Government of India.

Memoirs of the Geological Survey of India—Palæontologia Indica, Vol. II. Part 1.,—The fossil Flora of the Rajmehal Series.—By the Bengal Government.

Sketch of the Flora of the country passed through by the expeditionary force under Brigadier-General Chamberlain in April and May 1860, with a Map, 2 copies.—By the Government of India.

Vividhártha Sangraha, Vol. VII. No. 80.—By the Editor.

Selections from the Records of the Government of India, Military Department, No. 3, containing Report on the extent and nature of the Sanitary Establishments for European Troops in India.—By the Government of India.

Exchanged.

The Athenæum for March, 1862.

The Philosophical Magazine, Vol. XXII. No. 150, Supplementary No., and Vol. XXIII. No. 154 for April, 1862.

The Calcutta Review for December, 1861.

Purchased.

Zoological Sketches, By Joseph Wolf, Second Series, Parts 1 and 2.

Journal des Savants for March 1862.

The American Journal of Science and Arts, Vol. XXXIII. No. 98.

Numismatic Chronicle No. 5 for March 1862.

Westminster Review for April, 1862.

The Literary Gazette, Nos. 195 to 198.

Natural History Review for April, 1862.

The Annals and Magazine of Natural History, Third Series, Vol. IX, No. 52.

Revue et Magasin de Zoologie Nos. 1 and 2 for 1862.

Revue des Deux Mondes, Tome XXXVIII. for 15th March and 1st April, 1862.

Comptes Rendus Hebdomadaires des Sèanees de l'Aeadèmie des Scienees, Tome LIV. Nos. 9, 10, 11 and 12.

Mahábháshya—Edited by Dr. J. R. Ballantyne, Vol. I.

Christianity eontrasted with Hindu Philosophy—By Dr. J. R. Ballantyne.

Lectures on the Scienee of Language delivered at the Royal Institution—By Prof. Max Müller.

Makámát Hameedee.

4th June, 1862. LA'LGOPA'L DUTT.

Report of Curator, Zoological Department, February, 1862.

During the long interval that has elapsed since the publication of my last report, the Society's collection of *Vertebrata* has been largely increased, and we have been favoured with numerous valuable donations.

1. From Col. A. P. Phayre, Chief Commissioner of British Burmá, a large collection principally of bird-skins, collected mostly in the Tonghoo district of the valley of the Sitang and on the route thither across the hills from that of the Irawádi, in 1860. Also some specimens of mammalia, which are as follow.

VIVERRA MEGASPILA, nobis, *n. s.* (or distinguishable race). Flat skins from vicinity of Prome. There are four recognisable races of Asiatic Civet, all of which differ from the African V. CIVETTA, L., in the erectile mane commencing between the shoulders instead of between the ears. Three of them are of the same large size as the African species, the fourth being (so far as I have seen) constantly much smaller. One, V. ZIBETHA, L., is well known from Buffon's figure, and is at once distinguished from all the others by the comparative indistinctness of its body-markings. It is common in Bengal,

Nepal, Asám, Sylhet, Arakan, Siam, Southern China, and was obtained by the late Dr. Cantor in the Malayan peninsula, being noted by him from Pinang and Singapore. A second race, V. CIVETTINA, nobis, inhabiting Southern Malabar, quite resembles V. CIVETTA, except in the particular of the mane. A third race, V. MEGASPILA, nobis, has been confounded with V. TANGGALUNGA, Gray, but is as large as the preceding, and has the spots fewer and much larger, and entire for the most part (or shewing little tendency to group into *ocelli)*; and on the sides they tend less to unite into vertical bands or stripes than in V. CIVETTA and V. CIVETTINA. Such are the specimens from Prome; and I think that the late Dr. Cantor possessed a similar one from Pinang (which he referred to V. TANGGALUNGA); while a third (stated to be Sumátran,) was assigned to V. ZIBETHA in Waterhouse's Catalogue of the Zoological Society's late museum.* V. TANGGALUNGA, Gray, is always smaller (so far as I have seen), with much smaller and more numerous spots grouping more or less into *ocelli;* a comparatively broad black dorsal stripe, and tail somewhat peculiar in its marking. This race inhabits the Malayan peninsula, Sumátra, Borneo, Celebes, Amboyna, and the Philippines (from which last locality I have seen examples). All are very closely akin; but as races are easily enough distinguishable, and they do not appear to grade into each other; being about equivalent to those of MARTES FLAVIGULA noticed in J. A. S. XXVI, 316.†

HELICTIS ORIENTALIS, Horsfield. Skin from Prome; and skeleton and stuffed skin of examples procured at Rangoon, in which locality I have observed the species wild.‡ Referring to the figure of H. ORIENTALIS, (Horsf.), in the *Zool. Res. in Jáva*, I cannot perceive in what respect the H. NIPALENSIS differs; nor can I learn in what the H. MOSCHATA, Gray, of China, also differs. H. ORIENTALIS, (Horsf.), would seen to be the animal with somewhat abraded fur. The Society's museum contains fine examples from Sylhet and Arakan.

SCIURUS BICOLOR, Sparrman; Sc. FERRUGINEUS, F. Cuv. *(Kerandrenii,* Lesson); and Sc. PHAYREI, nobis. The second belongs to Arakan

* *Vide* J. A. S. XVII, 1842, p. 344.

† *Martes Gwatkinsii*, C. H. Smith, from Másuri, would seem to be merely M. FLAVIGULA in summer vesture (*vide P. Z. S.* 1858, p. 516); but the Nilgiri race is, I believe, permanently black on all the upper parts. I find MARTES FLAVIGULA cited from the valley of the Amûr.

‡ Syn. *Melogale personata*, Is. Geoff., Belanger's Voy.; procured near Rangoon.

and Pegu, or essentially to the dividing range of hills which separate those provinces. The third is emphatically the Martaban Squirrel. I obtained it in the Martaban hills opposite to Moulmein, but never on the Moulmein side of the river; though Mr. Atkinson procured one lower down towards Amherst. (*J. A. S.* XXVIII, 275.) On the hills behind Moulmein, it is replaced abundantly by Sc. ATRODORSALIS, Gray, which, however it may vary, is readily distinguished from all its Burmese congeners by having conspicuously white whiskers. Sc. HYPERYTHRUS, nobis (said to be from Moulmein, but more probably from the hills bordering the Sitang valley), is very like Sc. ATRODORSALIS, but has black whiskers, the back, sides, and exterior of limbs, quite uniformly coloured, and no trace of the black patch upon the back.* Sc. PHAYREI I found to be the common species of the Martaban jungles, as high up as I went, far into the Yunzalin district of Upper Martaban; and the only other Squirrel which I observed there was Sc. BERDMOREI, nobis, both near Martaban station, and far in the interior. This largest of the striped species is a thorough ground Squirrel, which never ascends a tree, so far as I have seen, but on alarm retreats to the under-wood; its tongue is remarkably long and protrusile. At Rangoon the only species that I observed was Sc. PYGERYTHRUS, Is. Geoffroy, which is the ordinary Squirrel of Lower Pegu; but high up the Irawádi, in the Shan hills east of Ava, and again above Ava, Mr. W. T. Blanford met with a peculiar race, Sc. BLANFORDII, nobis, *n. s.*, which resembles Sc. PHAYREI except in wanting the black stripe along the flank, and in having the entire upper-parts greyer or less fulvescent. The four paws are albescent-fulvous in both races, tending more or less to rufous; and both have the tails black-tipped, and the cinnamon hue of the lower parts extending as a median stripe along the under surface of the tail. Neither of these, too, has any ruddy colouring on the face and ears, as in Sc. ATRODORSALIS and Sc. HYPERYTHRUS. From Sc. HYPIRYTHRUS, Sc. BLANFORDII is readily distinguished by its larger size, conspicuously black-tipped tail with pale line underneath, and also by the albescent-fulvous colour of the four paws above.† Sc.

* We have specimens of Sc. ATRODORSALIS without the black dorsal patch; but the whiskers are white, and the general colouring, especially that of the tail, readily distinguish them from Sc. HYPERYTHRUS.

† Two additional specimens of Sc. BLANFORDII have since been examined, which have been taken to England by Mr. W. T. Blanford.

ATRODORSALIS would seem to be the characteristic Squirrel of Amherst province; and southward again, in that of Tavoy, the ordinary species would appear to be Sc. CHRYSONOTUS, nobis; with also the pygmy striped Sc. BARBEI, nobis; which is closely akin to Sc. McCLELLANDII of Sikhim and Butan. The only Squirrel-skin we have from Mergui is like Sc. CHRYSONOTUS, but without a tinge of golden-ferruginous on the upper parts, though there is a trace of this hue on the sides of the neck and body: it nearly resembles an example from Malacca, which I have named Sc. CONCOLOR; but this has no trace of the golden-ferruginous on the sides of the neck and body, nor a well defined black tail-tip as in the other.*

Here it may be remarked that the CERVUS (PANOLIA) ELDI, Guthrie (*C. frontalis*, McClelland, *C. lyratus*, Schinz, *C. dimorphe*, Hodgson,—with horns a little abnormal as developed in captivity,—*Panolia acutirostris* et *P. platyceros*, Gray), is common in Pegu, ex-

* The following are the ascertained SCIURI of British Burmá:—

1. Sc. BICOLOR, Sparrman. The only species of the *giganteus* group inhabiting the range of territory; and found on all the hilly, tracts from the E. Himálaya to the Straits of Singapore. Burmese specimens have very commonly a pale cincture, more or less broad, at the middle of the body.

2. Sc. LOKRIAH, Hodgson. Eastern Himálaya; Khásyas; Arakan hills.

3. Sc. ASSAMENSIS, McClelland; *Sc. Blythii*, Tytler. Abounding in Asám, Sylhet, Arakan, and in E. Bengal; common about Dacca.

4. Sc. FERRUGINEUS, F. Cuv., *Mamm. Lithog.*; *Sc. Keraudrenii*, Lesson, *Zool. Voy. de Belanger*. Common in the hills of Arakan and Pegu.

5. Sc. PYGERYTHRUS, Lesson, *ibid.* Abundant in Lower Pegu.

6. Sc. BLANFORDII, nobis, *ut supra*. Valley of the Irawádi and neighbouring hills about Ava; perhaps not within the British territory.

7. Sc. PHAYREI, nobis. Common throughout the province of Martaban.

8 Sc. BERDMOREI, nobis. The common ground Squirrel of Martaban province; found also as far south as Mergui (?).

9. Sc. HYPERYTHRUS, nobis. Hills bordering the valley of the Sitang?

10. Sc. ATRODORSALIS, Gray. The common species of Amherst province; abundant on the hills behind Moulmein (certainly not Butan, as asserted by Dr. Gray. *Br. Mus. Catal.*)

11. Sc. CHRYSONOTUS, nobis. The ordinary Squirrel of Tavoy province, if not also of the interior of Amherst province (J. A. S. XXVIII, 275). A permanent variety (?), or race, without the golden-fulvous colouring of the back, in Mergui province.

12. Sc. BARBEI, nobis. The diminutive striped Squirrel of Tavoy, and of Mergui (?); closely akin to Sc. McCLELLANDII of the E. Himálaya. It also inhabits the interior of Amherst province; and, I suspect, Lower Pegu; and it is doubtless the Sc. McCLELLANDII apud Gray, from Camboja. *P. Z. S.* 1861, p. 137.

N. B. There can be little doubt that additional species inhabit the provinces of Tavoy and especially Mergui: and this sketch of the geographical distribution of the various races will doubtless have to be improved upon.

A Sc. SIAMENSIS is described by Dr. Gray in the *Proc. Zool. Soc.* for 1859, p. 478; and several species from Camboja in *P. Z. S.* 1861, 371.

tending thence northward to the Munnipur valley: it is also in Siam, as I have been recently informed by Sir R. H. Schomburgk; and the late Dr. Cantor obtained a fine skull with horns from Kedda, within the eastern confines of the Malayan peninsula;* but it does not appear to inhabit Martaban and the Tenasserim provinces. I repeatedly saw the venison of this species (the *T'hámine*) for sale in the Rangoon provision bazar, together with that of the Sâmur (or *Schâp*), Hog-deer (*Durai*, pronounced *Dray*), and Muntjac (*Gee*), indeed the four species together on one occasion; but always frightfully hacked by the Burmese, who do not even skin the animal before chopping it up. In Moulmein the Sâmur is commonly brought to the bazar in two entire unskinned halves, with the entrails taken out; and there also I remarked Hog Deer and Muntjac or 'Barking Deer' venison, but brought in less quantity than to Rangoon. With Major S. R. Tickell, at Moulmein, I saw a young living buck of the *T'hámine*, bearing its second horns, small, but of the typical or ultimate configuration; and a skull with similar horns (of the same age) was presented through me to the Society by Dr. Prichard of Rangoon, procured in the provision-bazar of that place;† the living animal is exceedingly like the Indian *Bárá Sing'ha* (C. Duvaucelii) in all but the horns, but is inferior in size; having the summer-coat bright rufous, with traces of *menilling*, more conspicuous in some does (as likewise in C. Duvaucelii and C. porcinus). Among the drawings bequeathed by Gen. T. Hardwicke to the British Museum is one of a very spotted buck of C. Duvaucelii from the Bengal Sundarbans. That this species does inhabit the Eastern Sundarbans, I have been assured; and the winter-coat is much darker and browner, of coarser texture, and considerably elongated about the neck. The habits resemble those of the Indian *Bárá Sing'ha*: this animal being much more gregarious, and more confined to open glades in the forest, than are the other Deer of the same region. Lt. Eld has well described the habits of the species in the Calc. Journal N. H., II, 415. The horns of the Munnipur animal can generally be distinguished from those of the more southern race, by being longer,

* Many years ago, Capt. Harold Lewis presented the Society with a fine pair of horns of this species on the frontlet, which he obtained at Pinang, and which were, doubtless (like those of Dr. Cantor), from the Kedda district.

† To Dr. Prichard, the Society is also indebted for the photograph of the two Andamánese, figured in Vol. XXX, 251.

smoother, and less branched; the brow-antler especially is more elongated; and the crown is usually bifid, or with but a slight third prong, instead of being strongly trifid, or in some instances with even a fourth large coronal prong; but I have seen southern examples of intermediate character, and one of the largest size which was well elongated. Col. C. S. Guthrie lately assured me that he had possessed a large Munnipur pair of horns which were quite single or unbranched, and the brow-antler in a continuous line with the beam.* This is an exaggeration of the ordinary Munnipur character of horn. Mr. Hodgson's *C. dimorphe* I consider exceedingly doubtful as having been captured north or west of the Brahmaputra.

To Col. Phayre, we are further indebted for some loose horns of (Burmese) Bos GAURUS; and for (now in all) three skulls of bulls of B. SONDAICUS, all from Pegu, and an imperfect skin of a cow: the latter being of a bright chesnut-dun colour, and exhibiting the characteristic white patch on the buttocks.

As regards the former species, the Gaour seems to attain even a higher development in the Burmese countries than in India; not unfrequently, it would seem, attaining to 19 hands from the summit of the elevated dorsal ridge; and the horns, generally, are much more robust and considerably shorter, in both sexes, than in Indian Gaours.† A remarkably fine skull, with horns, of the latter (*minus* the lower jaw) in the Society's museum weighs just 30 lbs.; an equally fine skull of the Burmese race (*minus* the lower jaw), belonging to Col. A. Fytche, (Commissioner of the Martaban and Tenasserim provinces,) weighs 34 lbs.: both skulls of highly developed bulls, of course. From what I remember of a fine bull-skull, from the mainland near Singapore, I think that the horns were longer, as in the Indian race; but further observation is necessary of the Malayan animal, which probably resembles that of the Indo-Chinese region.‡

The Bos SONDAICUS appears to be common enough in parts of Upper Pegu, again in Mergui, and it occurs in Keddá, within the eastern confines of the Malayan peninsula, in Siamese territory; probably, also,

* A small specimen (3rd year), thus characterized, he has since presented to the Society.

† This I partially remarked in J. A. S. XXI, note to p. 433.

‡ Some Burmese heads and horns are, indeed, quite similar to Indian specimens. Such an example is figured as "the head of a Tenasserim Bison," in Col. Low's History of Tenasserim. Jour. Roy. As. Soc., Vol. III, p. 50.

elsewhere in the Malayan peninsula, as likewise in Jáva, Báli, Lombok, and Borneo. The horns of a female I saw with Col. Fytche are precisely similar to those figured by Dr. Salomon Müller; but the skull of this sex is still a desideratum in the Society's museum. Capt. Lloyd (Assistant Commissioner of the Tounghoo district, valley of the Sitang), is now endeavouring to procure a perfect skeleton of a bull of this species for the Society's collection.*

* In the 'Journal of the Indian Archipelago' for May, 1852, p. 270, the late G. Windsor Earl identified the Banteng of Java with the (wild Ox) of the Malayan peninsula; but he merely gives the English appellations, and may have confounded B. GAURUS with B. SONDIACUS. Dr. Cantor knew only of B. GAURUS as indigenously wild in the Malayan peninsula. (*Vide J. A. S. XV*, 272.) The Count de Castelnau (French Consul at Bangkok) recently wrote me word from Singapore, that "The domestic cattle of Siam are of two races, one being the common Zebu, and the other humpless: the latter is the more common, and the horns of both are of very moderate size. I will write to Siam to get the horns and skull for you, and all possible information about the animal. The wild Ox is very rare in Siam: I only saw one, and it certainly belonged to B. GAURUS. In the Malayan peninsula there are *two sorts*, but only found in the central parts; and my collectors could not bring back specimens of such bulky animals. If you wish for the skulls, I will endeavour to obtain them for you."

Sir R. H. Schomburgk also writes—"The Buffalo is the animal used for agriculture and economical purposes in Siam. A murrain broke out some time since among them, and all export of them was forbidden. There is another kind of cattle here, to which you allude on Crawfurd's testimony: they are but small in size, and are quite different from the Zebu, not possessing the hump. I do not consider them indigenous. But the species to which you principally allude [I meant B. SONDAICUS,] is what I take to be the Gaour (B. GAURUS), roaming wild, and [illegible] in Camboja. I have never seen it, but possess a pair of horns, which I will forward to you with the skull of the kind of Ox that Crawfurd alludes to. You are probably aware that in the same way that the flesh of the Swine is forbidden to the Israelites and Mahomedans, that of the Ox and other substantial animals is interdicted to the Siamese [*vide J. A. S. XXIX*, 302]. The latter do not adhere very strictly to the ordinance; and, with the Americans residing here, we Europeans may taste occasionally some beef, though weeks may pass without it. Now I have addressed myself to the butcher who furnishes my house, and I have told him that I require the skull of one of the domestic cattle that Crawfurd mentions. He told me that there were not any now in Bangkok, but he would proceed into the interior where he might get them if I procured him a passport from the Siamese authorities. I have done so, and we must now await the result. If he succeeds, I shall insist upon being present when the animal receives its death-blow, to ensure its individuality." I have written to my very old personal friend, Sir R. H. Schomburgk, to request that he would send a bull-skull, if procurable, rather than that of an ox.

As our knowledge of the Tsoing or Banteng (as a continental species) is still but scanty, the following notice of it may be deemed worthy of transcription. Mr. H. Gouger, in his 'Personal Narrative of Two Years' Imprisonment in Burma' in 1824-6 (published in 1860), was returning from captivity, when he "landed on the right bank of the river [either the Gyne or the Attaran] with three boatmen, leaving the fourth in charge of the jolly-boat. As the forest was dense, and as we had to make a pathway for ourselves through the brushwood where there was any, we walked in Indian file, one of the men leading the line, in which I followed second, the others bring up the rear. To avoid the danger of losing our way, we took the usual precaution of chipping the bark. * * * We had not proceeded in this way more than a quarter or half a mile, when my leader, an

The Gayál or Mit'hun (Bos FRONTALIS) I have vainly endeavoured to trace southward of Akyab; but it abounds (in the domestic state)

intelligent wood-man, stopped suddenly and dropped on his knee, a backward motion of his hand told me to be quiet, I followed his example, repeated the signal to those behind, and so we all remained still, until the leader, without venturing to look round, motioned me forward with a finger. The nature of the ground enabled me to creep in advance without the noise even of my footstep, until I reached the spot where the man was hidden.

"A beautiful spectacle now opened upon us. A few bushes screened us from a circle of verdant herbage, which had apparently been covered with water in the rainy season, and in this little shallow basin were to be seen a herd of wild Cows quietly grazing on the rich pasture [*i. e.* not *browsing*, like so many Gayáls]. The herd might have numbered about sixteen or eighteen, and from the placid, unconcerned manner in which they enjoyed their food, appeared to have no sense of danger or knowledge of the proximity of any unusual intruders. Not so the bull; when I first caught sight of him he was motionless as a statue, his bold front turned towards us, and his head and neck stretched so erect towards the sky that his nose was perpendicular with his fore-legs. He could not see us, but he evidently smelt us, though there was no wind to carry the scent in his direction. It was a hot day and a dead calm. The sight was beautiful beyond description.

"I remained gazing at them in deep silence and admiration for more than half a minute, my double-barrelled gun laden with balls was in my hand, and I could easily have brought down the bull, as he was not more than thirty yards off; but the sight was too engaging, and I let him off. On a sudden the beautiful statue seemed to have come to the decision that there was danger in the wind, as he set off at full gallop into the forest in the direction opposite to me; the cows, who to the last manifested not the slightest sense of danger, left off feeding in a moment and followed their lord at full speed, the crashing of the brushwood for some time after we lost sight of them attesting their alarm. I did not know at the time what a rare sight I was witnessing, one which I was afterwards told by an accomplished naturalist had not been enjoyed by any European traveller before. This was unfortunate, as, had I known it, my observations would have been more minute. The following facts, however, may be depended upon:—

"The cows were small in stature, considerably smaller than the breed of Alderney [?]; their shape and figure were light and elegant; they did not possess humps, like the domestic cattle of India; they were, without exception, of the same colour, a light reddish-dun; their beautiful slender legs being, all four, white below the knee. The bull was rather larger and thicker-set than the cows, he had a respectable dewlap, which, together with the breast and shoulders, was covered with longer dark hair, approaching to black. I do not well remember the horns, but I am inclined to think that they were not long, or I should most likely have remarked them. Both the bull and the cows were exceedingly sleek in their coats, which shone as though they had been subjected to careful daily brushing."

The above is the most detailed description that I have yet met with of the *Tsoing* of the Burmese countries, and (so far as it goes) it tallies sufficiently with B. SONDAICUS; the bull evidently young, with horns not fully developed, and in progress of assuming the blackish colouring of the body.

On the W. coast of the N. E. of Borneo, near Quabong, remarks Mr. Spencer St. John—"Along this beach, herds of wild Cattle are often seen wandering, particularly on bright moonlight nights, in search, most probably, of salt, which they are so fond of licking. All the natives declare that the species found here is smaller than those monsters I saw up the Limbang and Barang. It is very likely there may be two kinds." 'Life in the Forests of the Far East' (1862), I, 283. In the narrative of his Limbang journey, the same author remarks—"Pigs [SUS BARBATUS] are very numerous here, and wild Cattle and Deer are also abundant." *Ibid. II*, 38. He designates them *Tambadau*, and mentions

in the hills along the Kaladyne river (which flows from the north into Akyab harbour), and thence northward through Chittagong and Tipperá, to the Khásya hills and ranges of mountains bordering the valley of Asám to the south, and along them eastward to the Mishmi hills at the head of that valley, where abundantly wild. The domestic herds are even found together with those of Yaks: thus Lt. K. Wilcox, in his memoir of a survey of Asám and the neighbouring countries (*As. Res.* XVII, 387), notices that "Mit'huns and chori-tailed cows were grazing in great numbers;" which indicates that the Gayál can withstand a considerably low temperature for a member of its particular group, that of the flat-horned taurine cattle of S. E. Asia.*

The domestic humped cattle of Burmá are remarkably handsome animals, though with small and commonly abnormally developed horns, that are mostly directed forward. Col. Yule notices this race as one of "sturdy and well-conditioned red oxen." The prevalent colour is, indeed, a chesnut or bay of various shades, or commonly a dun, as in the cows and immature bulls of B. SONDAICUS. White or pale grey cattle, retaining the black tail-tuft, so very general in India, are rare, even at Akyab, where the common Bengali type prevails. Col. Yule continues—"These cattle, though much smaller than the stately breeds

an islet which is named Tambadau Island from the occurrence of these wild Cattle upon it. Elsewhere, he mentions a *piebald* individual! "About 2 A. M., our garei [boat] being well ahead, we saw before us a herd of wild Cattle, quietly picking at a few blades of grass on a broad pebbly flat. I landed with a couple of men, to get between them and the jungle. I was within twenty yards of the nearest, a piebald, and was crawling through the tangled bushes to get a sight of him, which I could hear browsing [grazing ?] near me, when there arose a snort, then a rush, and the Cattle were off dashing close to me, but perfectly concealed by the matted brushwood. It was the crew of one of the newly-arrived boats that, regardless," &c. &c. "About five, we were passing down a rapid at a great pace, when one of the men touched me and pointed. I looked up, and there was a magnificent bull, three-parts grown, standing within fifteen yards of me." *Ibid, II*, 162-3. Such cursory notices are all that are given by Mr. St. John!

Since the above note was printed, I have received a living two-year-old bull of BOS SONDAICUS from Col. Phayre, for presentation to the London Zoological Society. He is more nearly akin to the Gaour, and less so to the true B. TAURUS, than I had anticipated; and is perfectly quiet and tractable. He habitually *grazes*. Colour that permanent in the cow, a bright chesnut-dun, with the white *stockings* and oval rump-patch on each side.

* As regards the notice by Col. Low of three presumed species of wild taurine cattle in the Malayan peninsula, and that by Dr. Helfer, of three presumed species in the Tenasserim provinces (both quoted in J. A. S. XXIX, 299), I have now arrived at the conviction that both writers intended B. GAURUS and the different sexes of B. SONDAICUS, the latter supposed to be distinct animals. Of the *Jungli Gau*, figured M. Fred. Cuvier, I may remark that the male undoubtedly represents a hybrid between this and the humped species; but his female would seem to be a Gayál of pure blood.

of central India and the Deccan, are considerably larger than the Bengali bullocks, and are more universally in good condition than is the case perhaps in any other country. The carts are small, and the cattle share with their masters in the exemption from everything like overwork. But probably the main reason of their good condition is, that there is no demand for milk; the calves are robbed of no part of their natural food,"* I was much struck with the *game* appearance of these animals, which are as superior to the ordinary Bengali bullock as are the admirable Shan ponies to the wretched *tats* of Bengal (seen also at Akyab). They are longer in the body and shorter in the limbs than ordinary Indian cattle, more as in the humpless B. TAURUS; invariably in fine condition (as Col. Yule remarks), and particularly active and graceful in their movements, which are those of a wild animal, especially the cattle seen about the villages of the interior; and they are of Shan origin, so far as Burmá is concerned, as I am assured.

The Buffalo does not appear to be indigenous either in the Indo-Chinese or Malayan countries, though many have reverted to a state of wildness, as elsewhere. At Tavoy I first observed the superb domestic Buffaloes of Burmá, which differ in no respect from the wild animal of Bengal: they are large and plump in condition, with well developed horns. Tavoy is famous for its Buffalo fights; and I was shewn the 'champion' Buffalo, which had vanquished every competitor: he is a splendid creature of his kind, and so gentle that children fondled him. Near Tavoy I saw a large herd of albino Buffaloes, with about half a dozen of a buff colour intermingled. Stalking amidst this herd were about a dozen of TANTALUS LEUCOCEPHALUS, and numerous white Egrets (HERODIAS INTERMEDIA of my Catalogue). The leprous-looking albino breed of Buffaloes is common

* Col. Yule adds, in a note,—"I believe the aversion to milk, as an article of food, obtains among nearly all the Indo-Chinese and Malay races, including specifically the Khásias of our eastern frontier, the Gáros and Nágas, the Burmese, the Sumatran races, and the Javanese. In China itself, it is also prevalent, as Sir John Bowring mentioned it in a letter on the population of China, published in the Journal of the Statistical Society. The use of milk has, however, been adopted at the Burmese Court, and the supply is furnished by some families of Kattra Brahmans, who maintain a number of cows near the capital. But it is a foreign usage." (*Narrative of the Mission to the Court of Ava in* 1855, *p.* 2. *Vide* also J. A. S. XXIX, 286, 302, 378). Of the natives of Kandy, likewise, Sir J. E. Tennent remarks, that—"Milk they never use, the calves enjoying it unstinted; and the prejudice is universal, that the cows would die were it otherwise disposed of." (Ceylon, II, 452. 5*th edition.*)

also in Siam, the Malayan peninsula, and Sumátra. I saw some immense bull Buffaloes drawing hackeries near Martaban station, that would have astonished the natives of Bengal; and many others in the interior, feeding in the forest near the Karen villages, and which are oftentimes unsafe for Europeans to approach, though quite tractable to the natives to whom they are accustomed.*

Of birds, the following new species were procured by Col. Phayre.

Gecinulus viridis, nobis, *n. s.* Differs from G. Grantia, (McClelland), in being wholly of a dull green colour, more yellowish towards the nape; the rump feathers crimson-tipped: inner webs of the wing-feathers dusky, with round white spots as seen from beneath, these spots being much smaller than in G. Grantia: tail dusky above, the feathers green-edged for the basal half, and all but the middle pair having four small whitish spots bordering the basal half of their inner webs. Bill ivory-white, save laterally towards base, where livid. Feet green. The male would doubtless differ (as in G. Grantia) by having a red coronal patch. From Tounghoo.

Crypsirina cucullata, Jerdon.† Form typical, except that the

* At Mergui, I was riding along a beautiful jungle-road, when, coming to a swamp, a herd of about thirty of these huge beasts rushed suddenly from the jungle, and made direct for me through the shallow water, menacing by tossing their heads and raising their tails and stamping with their fore-feet, when at last they came to a halt, one after another. I confess that I did not overmuch like the look of them, but still could not help admiring their noble appearance. To have run from them would have been to entice them on; so I checked my pony, not to appear alarmed, and walked quietly by in front of them, they continuing to menace all the while; after a short time I broke into a trot, and thought that I had well passed the Buffaloes, when, looking behind, I found that I was pursued by two bulls, who were already in unpleasant proximity to my nag's tail, their foot-fall producing no sound on the thinly turfed sandy road. I turned suddenly round and shouted at them, when they made off right and left, to my relief and rather to my surprise. I was afterwards necessitated to repass the same herd on my return, when half a dozen of them were fronting me in the centre of the only path, though scarcely threatening as before. I thought it best policy to ride direct towards them at a fast pace, and, when quite close to them, again shouted aloud, whereupon they at once dispersed, trotting off quietly into the swamp. A little afterwards I passed another and much larger herd of these wild-looking Buffaloes, but which took not the slightest notice of me. A native child will belabour them with a stick, and soon clear a passage through the herd. But they are not always to be trusted. When I was first at Moulmein a *must* bull tore through the main street of that town, killing one man and injuring others, and then betaking himself to the river, when the ebb-tide being at the time very strong, it was supposed that he was carried out to sea.

† This and the next species, with some others procured at Thayet-myo, have been lately described by Dr. Jerdon in *The Ibis*. My written descriptions, however, of this and one or two others, were awaiting publication for a considerable time before my friend, Dr. Jerdon, obtained his specimens. Of course I now adopt his appellations.

beak is much shorter than in Cr. varians, and there is no velvety frontal band as in the other: ten tail-feathers only; and the long middle pair expanding greatly at tip, as in Cr. varians. General colour silvery pearl-grey, with a black hood and white nape; the primaries and their coverts black, the secondaries having a whitish exterior border; middle tail-feathers black, a little tinged with greyish except on the expanded tips; the graduating lateral tail-feathers albescent-greyish, with a faint tinge of brown. Bill black, the base of both mandibles, below the nasal tuft of the upper, bright yellow in the young; and feet dusky. Length about 13 in., of which tail $7\frac{1}{4}$ in., its penultimate feathers $1\frac{1}{2}$ in. less: closed wing $4\frac{1}{4}$ in.: bill to gape 1 in.; and tarse the same. Tounghoo.

The Cr. varians (also sent) is particularly common in the hills behind Moulmein; and is one of several Javanese species that likewise inhabit the Burmese region, and have not hitherto been observed in the Malayan peninsula. Another is Ploceus hypoxanthus, (Daudin), a flock of which I observed in Rangoon (in addition to the common *Báyá*, the two species associating apart), and specimens were obtained by Dr. Jerdon in Thayet-myo. Crypsirina cucullata is interesting, as constituting a second well-marked species of its genus, both of them being remarkable among the *Corvidous* Pies for having only ten caudal *rectrices*.

Temenuchus burmanensis, Jerdon. A fine species, approaching to acridotheres in size, the markings of its wings and tail, and also in having the skin bare under and behind the eye. Length about $9\frac{1}{2}$ in., of closed wing $4\frac{1}{2}$ in., and tail 3 in.; bill to gape $1\frac{1}{4}$ in.; and tarse $1\frac{1}{4}$ in. Culmen of bill compressed and elevated above the nostrils. Head, cheeks and throat, white; the back and scapularies pure ashy; and the lower parts vinaceous, passing to white on the lower tail-coverts: wing-primaries white at base, the remainder black; secondaries and tertiaries, with their coverts, bronzed, and having a narrow black margin to each feather; underneath, the wing is white on the anterior half and dusky for the remainder; middle tail-feathers brown, and black-margined like the tertiaries, the rest black—each feather more largely white-tipped to the exterior. Bill coral-coloured, with the basal half of the lower mandible and below the nostrils black: legs and claws bright yellow. Tounghoo. Procured also at Thayet-myo by Dr. Jerdon, and at Ava by Mr. W. T. Blanford.

It is also evidently the species to which Major Tickell directed my attention, as a white-headed Maina common about Rangoon; and which he had only observed in that vicinity; but I did not chance to meet with it.*

ANTHOCINCLA, nobis, *n. g.* A very remarkable Thrush-like *Myiotherine (?)* form, with short tail and rounded wings; the tarse moderate or somewhat short, and the toes furnished with straight claws, especially that on the hind toe. Bill as in the coarser-billed OREOCINCLÆ, with no perceptible notch to the upper mandible. No rictal *vibrissæ*. Plumage devoid of bright colours.

A. PHAYREI, nobis, *n. s.* Length about $9\frac{1}{2}$ in., of which tail barely 2 in; closed wing 4 in., the fourth and fifth primaries longest, and the first primary measuring 2 in.: bill to gape $1\frac{1}{2}$ in.; tarse $1\frac{1}{8}$ in.; hind-claw $\frac{9}{16}$ in. Colour a rich brown above, paler and more fulvous below, where each feather has a black spot on either web: middle of throat white, bordered laterally with black, and this again by a streak of black-margined fulvous-white feathers, below the brown ear-coverts; a long supercilium of feathers resembling those of the white moustache-streak, and above this again the feathers on the sides of the crown are squamate and pale-centred: primaries and their coverts black, save an angular fulvous spot at the base of the first primary; tertiaries plain brown, like the back, but the coverts of the secondaries black with broad fulvous sagittate tips. Bill dusky; and feet and claws pale. Tounghoo.

PYCNONOTUS FAMILIARIS, nobis, *n. s.* Form typical. Plumage light earthy-brown, paler beneath, less so on the breast; the lower tail-coverts a little rufescent: stems of the ear-coverts conspicuously white. Bill dusky-corneous; and legs apparently the same. Length about 8 in., of which tail $3\frac{1}{2}$ in.; closed wing $3\frac{1}{2}$ in.: bill to gape $\frac{7}{8}$ in.; and tarse the same. Tounghoo. This dull-plumaged species was also procured at Thayet-myo by Dr. Jerdon, who informs me that

* ACRIDOTHERES TRISTIS, ACR. FUSCUS, and STURNOPASTOR CONTRA, *var.*, I observed abundantly so far south as Mergui; but I know of only the second as an inhabitant of the Malayan peninsula. Tenasserim specimens of the first are dark-coloured, like those of Ceylon. At Mergui there is also the CALORNIS DAURICUS, a common Malayan species. TEMENUCHUS MALABARICUS I observed abundantly near Moulmein, and far in the interior of Martaban province. The *Pastor peguanus*, Lesson (Belanger's *Voy.*), is no other than the young of P. ROSEUS!

its habits are remarkably confiding and familiar, whence the specific name.

Osmotreron Phayrei, nobis, *n. s.*: *Treron malabaricus* apud nos, *passim*. Distinguished from Osm. malabaricus (*verus*) by having the entire cap ash-coloured in both sexes, and the male, by having a large ochreous patch on the breast. Common in Asám, Sylhet, Arakan, Pegu, Martaban, and rare in Lower Bengal. It is the only species of the group which I observed in the forests of the Yunzalin district, Upper Martaban, where exceedingly abundant. At Moulmein I obtained the Osm. bicinctus, (Jerdon).

(The following kindred races have to be recognised.)

Osm. malabaricus, (Jerdon), *Ill. Ind. Orn.*; *Vinago aromatica* et *V. affinis*, Jerdon, *Catal.* Has the forehead whitish-grey, and no defined ash-coloured cap, though a tinge of that colour on the crown. Throat and front of neck yellow. Malabar. *N. B.* The *V. affinis*, Jerdon, seems rather to accord with the female of Osm. Phayrei; but the latter race can hardly occur in Malabar.

Osm. flavogularis, nobis, *J. A. S. XXVI*, 225; *Vinago aromatica* apud Selby, Jardine's *Nat. Libr.*, 'Pigeons,' p. 97; *V. aromatica* var., Jerdon, *Catal.* Distinguished by its yellow forehead as well as throat, and by having the lower tail-coverts of the male white-tipped green, as in the female, and as in both sexes of Osm. chloroptera, nobis, of the Andamán and Nicobar Islands; whereas in the other species the lower tail-coverts of the male are of a dark cinnamon-colour. Hab. Malabar and Ceylon.

Osm. pompadoura; *Columba pompadoura*, Gmelin. *Vide J. A. S. XXVI*, 225. Ceylon.*

* The other birds collected by Col. Phayre are—Palæornis javanicus, Hæmatornis cheela, Circus melanoleucos, Micrastur badius, Athene cuculoides, Upupa longirostris, Jerdon (rufous Burmese race), Coracias affinis Merops quinticolor, Ceryle rudis, Megalaima lineata, M. indica, Hemicercus canente, Chrysocolaptes sultaneus, Tiga intermedia, Gecinus viridanus, G. occipitalis, Gracula intermedia, Munia punctularia (the Malayan type), Passer flaveolus, Euspiza aureola, Parus flavocristatus, Sitta castaneoventris, Dendrophila frontalis, Corydalla rufula, Pipastes agilis, Nemoricola indica, Garrulax Belangeri, G. pectoralis, G. moniliger, Chatarrhæa gularis, Abrornis superciliaris, Reguloides superciliosus, Phylloscopus indicus, Ph. affinis, Campephaga Sykesi, Irena puella, Pericrocotus speciosus, P. peregrinus, Chibia hottentota, Edolius paradiseus, Dicrurus longicaudatus, Chaptia ænea, Artamus fuscus, Hirunda rustica, Tchitrea affinis, Myiagra azurea, Cryptolopha poiocephala, Criniger flaveolus, Pycnonotus hæmorrhous, P. jocosus, P. melanocephalus, Phyllornis aurifrons, Ph. cochinchinensis, Iora

II. Col. Fytche, Commissioner of the Martaban and Tenasserim provinces, Moulmein.

The skeleton of an Andamán savage, a male of about 35 or perhaps 40 years of age, who died in the hospital of Moulmein at the time of my first visit to that station.* Finding that there was no hope of his recovery, I requested Col. Fytche to direct that his bones should be prepared for the Society's museum; but as I was just leaving at the time, I was unable to superintend the preservation of them. I regret now to find that the skeleton is very imperfect; too much so, in fact, to be set up. Of the vertebral column, the *axis* and one of the lumbar vertebræ are missing, also several of the ribs, and most of the small bones of the hands and feet. Of the teeth, the two medial and the left lateral upper incisors have been lost, also the first upper right præ-molar, the left lower canine and all the lower incisors, though one or more of these last may have been lost during life, as were the last upper true molars right and left, the *alveoli* of which have quite disappeared. As usual among savage races, the molars are ground evenly flat, or very nearly so. The skull is essentially of the Indo-Germanic type, very similar to some Hindu skulls, and exhibiting no tendency to the negro peculiarities. The parietal bones are rather broad and posteriorly flat; and the *glabella* (or inter-orbital space) is somewhat wide. The general character thus conforms to my observations of the living men, as embodied in Col. Fytche's notice of them, *J. A. S. XXX*, 364, *et seq.*; and at the time of making those remarks, I may observe that I had not seen Prof. Owen's notice of the skeleton of an Andamáner read before the British Association in 1861. The left *zygoma* of the individual had been fractured, but the bone had re-united, with a considerable bend inward occupying the anterior half of the arch.

Col. Fytche has also favoured us with the skull of a Rhinoceros, shot by Dr. Hook of Tavoy near Tavoy Point, where there is a small isolated colony of the species. I refer it to the narrow type of Rh. SONDAICUS.

(To be continued.)

TYPHIA, ORIOLUS MELANOCEPHALUS, O. TENUIROSTRIS, DICÆUM CRUENTATUM, NECTARINIA ASIATICA, N. PHÆNICOTIS, CARPOPHAGA SYLVATICA, TURTUR TIGRINUS, T. HUMILIS, FRANCOLINUS PHAYREI, TURNIX OCELLATUS, SARCOGRAMMA ATROGULARIS (the Burmese and Malayan type, which I procured so high as at Akyab, distinguished from the Indian by having the neck largely black all round, set off below by a white border), CHARADRIUS PHILIPPINUS, GALLINAGO STENURA, and STERNA JAVANICA.

* The individual known as 'Punch Blair,' *vide J. A. S. XXX*, 259.

Route Survey
from the
BAY OF BENGAL
to the
GULF OF SIAM
via the
ISTHMUS OF KRAU.
BRITISH TERRITORY
SIAMESE TERRITORY
GULF OF SIAM
MERGUI ARCHIPELAGO
TIN MINES
LINE OF RAIL
Victoria Pt.

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